

## Reading the 13th Five-Year Plan: Reflections on China's ICT Policy

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China's 13th Five-Year Plan (FYP) is the first chance for the Xi-Li administration, which assumed leadership at the 18th Party Congress, to solidify a new course. Notably, ICT is the highest priority sector in the 13th FYP. This article highlights the ascent of the Internet in China's national strategy. It illustrates why and how ICT development—accelerated by the spread of high-speed Internet—is tasked to underpin China's rise as a global power and its internal transformation. More important, drawing on the geopolitical economy approach that emphasizes the economic roles of states in sustaining and animating the capitalist world order on the one hand, and the digital capitalism literature that deems the political economy of ICT as an increasingly primary dimension of global capitalism on the other, this article sets up a conceptual framework for interpreting this key policy document and China's ICT policy in general.

*Keywords: cyber economy, cyber power, ICT and innovation, cyber openness, cyber security, state-capital relations, supply-side reforms*

China's GDP growth in 2015 fell below the 7% benchmark for the first time in decades. Worldwide deflation and slow recovery since the 2008 global economic crisis have been difficult macroeconomic conditions for the country. The state-led transition from an export-driven and investment-dependent economy to an economy based on domestic consumption and innovation proved to be difficult, further compounding the already sluggish global economy. In this context, China's 13th five-year plan (FYP) for 2020 is an important document, from both domestic and global perspectives.

The 13th FYP is the first chance for the Xi-Li administration, which assumed leadership at the 18th Party Congress in November 2012, to "solidify a new course" (Kennedy & Johnson, 2016, p. 2) that began with other policy documents and speeches. The 13th Five-Year Plan announces a set of new developmental principles—to pursue innovation-based, balanced, green, and open economic growth—that also allow its benefits to be widely shared. If the 12th FYP shows that policy makers came to terms with

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the pitfalls of the old growth model and were embarking on transitional measures, the 13th FYP indicates that they have worked out a vision for the future. But how does this vision parlay into policy and action?

Notably, ICT is the “highest priority” sector in the 13th FYP (Kennedy & Johnson, 2016). ICT is the most dynamic sector in China and worldwide, especially after Internet-protocol networks have spurred an outpouring of platforms, services, and applications. Burgeoning ICTs, from artificial intelligence to the Internet of things to cloud computing, are enabled and integrated by the Web to infiltrate the economy at large and, thus, portend the coming of another technoeconomic revolution. The question this article focuses on is, What does the 13th FYP say about how to play the digital card, and how should we interpret its intentions, thrusts, and limitations in view of structural possibilities and constraints?

From a communication perspective, this article highlights and characterizes the ascent of the Internet in China’s national strategy. Premised on the interweaving links between text and the political-economic contexts, this article examines the plan’s major principles and goals, policies intended for achieving these goals, and specific targets and situates the plan within broader historical and political-economic contexts, with sources synthesized from news, trade reports, government documents, and scholarly publications. The article illustrates, on both the textual and political-economic levels, why and how ICT development—accelerated by the spread of the high-speed Internet—is tasked to underpin innovation, structural reforms, the new industrial revolution, and the new digital economy, all critical restructuring goals the 13th FYP pledges to achieve. More important, drawing on and extending the geopolitical economy approach that emphasizes the economic roles of the states, especially those of contender states, in sustaining and animating the capitalist world order, on the one hand, and the digital capitalism literature that deems the political economy of ICT as an increasingly primary dimension of global capitalism, on the other, this article sets up a conceptual framework for interpreting this key policy document and for characterizing major possibilities and constraints China’s ICT development in general faces.

I argue that during the 13th FYP period, China will become a new epicenter of digital capitalist development, the process of which nonetheless will generate new contradiction and contestation in the political economy. Prioritizing digital technology and the digital economy in the quest to contend in the existing world order and better China’s position therein, the Chinese state, although a contender state, is still conditioned and constrained by the broad, contradictory Chinese and global political economies. Therefore, its actions may reflect and even reinforce the dominant global digital capitalist system. Moreover, if China’s rise is predicated on its internal transformation, China’s 13th FYP—focusing on technology, innovation, and industrial upgrading—may begin to overcome the contradictions that were generated by the investment-export model on which China has relied, but only at the price of introducing still other contradictions, different but perhaps equally severe.

### **Economic Crises, Digital Capitalism, and the State**

China specialists have duly scrutinized the 13th FYP to infer the possible nature, direction, and pitfalls of the state-led reform. Defying any teleological trajectory of transition toward a full-blown market economy expected by Western mainstream analysts (see Kennedy, 2016a), the plan shows that the

proactive involvement of the state in economic development will continue because it entails ambitious industry policy and pledges to strengthen state-owned enterprises. On the philosophical level, the plan, as the “defining document of the state’s approach to economic governance” (Kennedy, 2016b, p. 51), also refuses the state-market dichotomy. The debate is not about accepting market forces or not, but “whether they can be saddled and yoked to the party’s preference” (Rosen, 2016, p. 3), especially for the sake of strengthening the economic foundation of the party’s ruling at home and enhancing China’s position in the hierarchical structure of global capitalism (Martin, 2016).

As a token of active state involvement in the economy, industrial policy has the strongest expression for ICT in the 13th FYP. The Chinese state was and continues to be active in ICT development. In the past three decades, the state hosted a world-class ICT-dominant export-processing regime and encouraged systematic adoption of Western ICT products. While actively embedding China’s ICT development in the major global value chains, the state has also used policy levers from ownership to market access to standards, all intended to change China’s position. The 13th FYP affirms and fortifies industrial policy, especially but not limited to ICT. Why?

This is part and parcel of a global trend. The 2008 global economic crisis fractured the old capitalist world order and accelerated the drifts of change. In this context, many developed and developing countries, regardless of what they say, have geared up industrial policy for select industries in a scramble for next-generation competitive advantages (Wade, 2014). But the dominant thinking of economics embedded in such disciplines as international relations and international political economics continues to problematize active state intervention from a neoclassical economics perspective (Desai, 2015b). The unapologetic intention of state intervention manifest in the 13th FYP, therefore, creates a feeling of unease and even pessimism in this ambiguous ideological milieu marked by “the strange non-death of neoliberalism” (Crouch, 2011, cover).

The visible hand of the state can be theoretically traced back to the contradiction inherent in capitalism between overproduction and underconsumption. In light of incessant capitalist crises, states take both domestic and international economic actions, although the configuration of state intentions, abilities, and practices is historically formed and thus varying, and although the outcomes accruing to economies and capitals can be contingent (Pratschke, 2015). This basic Marxist view, however, has been marginalized since the 1980s, when the neoliberal antistate and free-market policy became the dominant prescription for national economic growth (Desai, 2013). Still, the “developmental states” literature and the “varieties of capitalism” literature have insisted that capitalist states always play “critical and, indeed, indispensable” (Desai, 2015a, p. 449) economic roles and that developing-country states should use industrial policy as an “inner wheel of the diversification and upgrading process” (Wade, 2014, p. 796).

States take economic actions not only to manage capitalist crises. The uneven nature of global capitalism also encourages contender states to accelerate capitalist development to contest the world order, thus making imperialism, empire, and hegemony incomplete projects (Desai, 2013). China is a contender state. Deviant from the outright neoliberal Washington consensus, the Chinese state oversaw a gradual approach toward economic global integration. The state allowed market liberalization in the margin where transnational capital and private capital were ushered in to jumpstart an export-processing

industrial economy. Meanwhile, it deliberately sustained protection and even state domination in strategic sectors. Although this dual-track approach cultivates serious problems, such as corruption, price distortion, and market fragmentation, and is even partly responsible for reinforcing the old growth model, this Chinese approach characterized by an active interventionist state is credited by economists for enabling China to reap the latecomer advantage for nearly 30 years and to grow into the second largest economy in the world—an achievement not shared by any other developing countries (Lin, 2014; Wu, 2014).

Still, entangled with the global capitalist economy, China shares a good portion of the structural imbalances exposed by the 2008 global economic crisis, and the country's further rise as a global economic power is contingent. Dependent on investment- and export-driven growth, China's economy has built up serious gluts in traditional manufacturing and real estate markets. When overseas demand slackened, China's economy slid into a structural gridlock as the wage-depressing mode of accumulation, well entrenched in the economy, has kept residential demand from becoming a replacement, and as fixed-asset investment is unlikely to continue without evoking serious financial crises. The economic complexity has contributed to social instability. According to the China Labor Bulletin (CLB, n.d.), the occurrence of labor unrest ratcheted up from February 2014 to January 2016. Faced with downward pressure in global trade and rising labor tension at home, and caught up in intense competition in the global capitalist system, the Chinese state is forced to undertake economic restructuring in a way rarely seen before—notably, by actively accelerating digital capitalist development.

It is still debatable under what circumstances and at what costs active state involvement, specifically industrial policy, will facilitate economic restructuring and digital capitalist development. But for analytical purposes, state-business interaction, instead of their opposition, was and continues to be a key variable in the evolving Chinese political economy. So, instead of dismissing ambitious industrial policy as an anomaly that needs to be fixed (see Kennedy & Johnson, 2016; US-China Business Council, 2016), this article suggests an alternative reading of the 13th FYP, to both recognize the economic roles of the state and to underline contradictions and contestations that follow. In light of the ascent of the Internet in the 13th FYP, I specifically analyze the complex, evolving, and contingent bonds between the state and capital on the domestic front and explores the contradictory geopolitical-economic implications on the global scale.

### **The 13th FYP: Prioritizing ICT Innovation for Supply-Side Reforms**

The Chinese state pledged to advance indigenous innovation and began to orchestrate Web-enabled IT modernization, known as informatization, after the country had become a global manufacturing powerhouse. Reflecting this general historical trajectory and occasioned by various phases of developmental needs, each of the five-year plans in the past decades has given ICT an instrumental and increasingly outstanding position, beginning with the seventh FYP, in 1990, which called for expanding electronics export and prioritizing telecom buildup, and continuing in the ninth FYP, in 2000, with a declaration to turn the electronics industry into a pillar industry and to informatize the Chinese economy, society, and governance; in the 10th FYP, in 2005, with a pledge to accelerate ICT industrial development and to advance informatization; and in the 11th FYP, in 2010, which set the goal of upgrading ICT industries and actively promoting informatization.

In the current stage, the state further accords an unprecedented status to networked ICTs and network connectivity as central and systematic elements in the economic restructuring scheme. The 12th FYP, the first FYP crafted after the 2008 global economic crisis, linked economic restructuring with ICT development (Atkinson, 2014). It made a pledge for the first time to turn cultural industries into an economic pillar. It also made "comprehensive" adoption of networked ICT applications, changing from "active promotion" stipulated by the 11th FYP, a key measure for upgrading manufacturing industries, atop its pledge to develop "strategic emerging industries," the first use of this term, which includes, first and foremost, new-generation ICT industries. How does the 13th FYP continue these programs and differ from earlier plans?

After having inherited the 12th FYP from the Hu-Wen administration, the Xi-Li administration used the 13th FYP to synthesize new policies made under their own purview. During the drafting process, a chapter dedicated to supply-side reforms was added (Kennedy & Johnson, 2016). The Communist Party of China (CPC) Finance and Economics Leadership Small Group (FELSG) introduced this concept in November 2015. Its inclusion in the 13th FYP as the primary task was meant to communicate its importance to various stakeholders. In May 2016, after the National People's Congress ratified the plan, the FELSG once again called for supply-side reforms to be the highest priority (Naughton, 2016). In essence, supply-side reforms aim, foremost, to reduce gluts in traditional manufacturing and housing markets and, at the same time, to create new driving forces. Policy makers still deem a moderately active macroeconomic policy indispensable for keeping growth rates in a safe scope. But through supply-side reforms, they aim to adjust public and corporate investment in a way to facilitate a smooth transition from old to new driving forces—in view of the 1.8% drop in exports in 2015 and a 2.1% drop in the first half of 2016 ("China's Gross Value of Imports and Exports," 2016; Yang, 2016).

As supply-side reforms are the major task, innovation is the leading principle intended for creating new driving forces. After the introduction section, the very first substantive section in the 13th FYP is dedicated to innovation. In the plan, innovation is about fortifying the leading role of science and technology, promoting popular innovation and entrepreneurship, setting up incentive mechanisms, giving priority to talent development, and cultivating new spaces for development. In comparison with earlier plans, the 13th FYP is "incredibly ambitious": It makes some substantive promises to stimulate innovation, prioritizes about 75 technologies in comparison with the 57 highlighted in the 12th FYP, and gives ICT a central, crosscutting, and catalyzing role in innovation-driven development (Kennedy & Johnson, 2016).

Illustrative of the leading role of science and technology, the plan includes a state-level science-and-technology program for 2030, which plans to sponsor six areas, including quantum communication and cyber security, and a major-project program that sponsors big projects related to big data, smart electric grids, integrated information networks, and smart manufacturing and robots. On the policy and institutional levels, the plan pledges to give business more say in innovation policy and to delegate the use of intellectual property rights to enterprises, universities, and researchers.

Furthermore, the Internet and networked ICTs are diffusely integrated into major reform agendas and crosscut specific tasks from modernizing agriculture to upgrading manufacturing and from promoting service industries to improving the regulatory and institutional frameworks. The task of "developing the

modern industrial system," for example, entails the "Made in China 2025" program, which is predicated on a deep integration of ICTs and manufacturing industries, and an action plan for six strategic emerging industries, culminating in a pledge issued in December 2016 to expand new-generation ICT industries and digital creative industries into new pillars, each with 10 trillion yuan in annual turnover (State Council, 2016). By the same token, the task of reforming the administrative system enlists the help of big data and the Internet. Indeed, ICT development has importance beyond one specific sector to the whole economy.

Ultimately, the unprecedented importance granted to ICT is encapsulated in the first-time section dedicated to the cyber economy, titled "Expanding the Internet-Based Economic Space." The section calls for closely following technological trends, implementing a cyber power strategy, integrating ICTs deep into the economy and social life, and supporting fast development of the information economy. It has four chapters, on: building ubiquitous networks, developing a modern system of Internet industries, implementing the national big-data strategy, and fortifying information security protection. Overall, state planners intend to build a more competitive economy by modernizing the network infrastructure, creating new industries based on or touched by ICT, and using ICT as a crosscutting catalyst for innovation, industrial modernization, and export upgrades.

Will this strong emphasis on innovation and industrial modernization—largely predicated on the expansion of ICT industries and applications—create positive results for the economy? We can make some educated guesses with evidence from the period of the 12th FYP. During that period, China's economy made some notable transitions. Scientific research and development spending doubled from 2008 to 2012 (OECD, 2014). By 2015, the last year of the 12th FYP period, service industries had outpaced manufacturing industries in terms of value added. Although household final consumption expenditures as part of the GDP slid from 37.7% in 2011 to 36.5% in 2014 (World Bank, n.d.), consumption of info-tech products soared (MIIT, 2013).

While we can expect these uplifting trends to continue in the 13th FYP period, we should also anticipate limits. Prioritizing technology, innovation, and industrial modernization is likely to overshadow agendas intended to improve economic justice. Under the Xi-Li administration, stimulating consumption has taken a back seat to industrial modernization. Although the first economic session of the Politburo Standing Committee chaired by Xi in April 2013 called for "focusing on releasing domestic demand" and "strictly controlling the reckless expansion," the subsequent sessions toned down this quest. The promised economic restructuring has turned out to be mostly a shift of investment "from backward industries to competitive industries" (Holslag, 2016, p. 176).

In the 13th FYP, the section on shared growth and social welfare is back in the document. It predicts, rather than mandates, growth for per capita disposable income to exceed 6.5%, lower than the 7% target in the 12th FYP. Indeed, supply-side reforms are expected to be a thorny and painful process, and the plan's social welfare policies are paradoxical: Although mandatory targets for developing affordable housing, alleviating poverty in rural areas, and increasing the average years of schooling for the working-age population are likely to mitigate downward pressure on human well-being in a difficult economic situation (Kennedy & Johnson, 2016), the state's corporatist efforts to reduce gluts in heavy industry on the one hand and to reduce business costs on the other are also likely to raise unemployment

rates and reduce labor's bargaining power. The first half of 2016 witnessed an 18% year-on-year rise in labor unrest, spurred mostly by business closure and pay arrears, followed by a third quarter in which labor unrest in total remained on par with the previous year's figures (CLB, 2016).

### **From Network to Core Technology: The Anatomy of State-Led Digital Capitalism**

"Building ubiquitous and efficient information networks" is the first task for the purpose of "expanding the Internet-based economic space" (Kennedy & Johnson, 2016, p. 2), continuing the prioritization of infrastructure spending in the 12th FYP. It is estimated that during the 13th FYP period, total investment in information networks will exceed 2 trillion yuan (Y. Hou, 2015). Indispensable for supporting a full-blown Internet-based economy in which things, alive or not, are connected and communicative, which the next section will discuss, the investment-driven buildup of a world-class digital infrastructure, largely managed by the state, also supports science and technology programs for technologies central to creating a "strong network nation." Because using the commodity chain to promote import substitution and even ICT innovation is a strategy incorporated into the 13th FYP, an anatomical dissection of the political economy of ICT, especially variegated state-business relations, is required to understand the links between industrial policy and network investment. For this purpose, a matrix is illustrative.

The commodity chain concept provides a vertical axis for the matrix. Scholars have used several terms to describe the dynamic ICT sector that has many moving boundaries and dynamic techno-business features. The "new ICT ecosystem" (Xia, 2016, p. 82), for example, captures the shift of the central gravity from telecom operators to platforms and mobile applications. In comparison, the concept of "Web-oriented communications commodity chains" (Schiller, 2014, p. 7) enables an "outward-looking inclusive" analysis, while disaggregating the ICT sector into networks, access devices, and services and applications. Such sensibility of "opportunities and constraints in the world economy and interstate system" (Wade, 2014, p. 792) counters the weakness in the developmental states literature that tends to ignore larger structures and focus exclusively on the internal capacity of the state.

Economic geography defined in terms of ownership provides a horizontal axis. From the outset, the state has managed economic global integration at its own "gradual, measured" pace (Kim, 2009). It deliberately deploys differentiated regulatory approaches for various sectors, depending on their strategic values (Hsueh, 2015). This differentiated regulatory system extends to the Web-oriented commodity chain. As a result, Internet industries span two different yet interconnected sectors in the economic geography: the liberalized market economy and the state-controlled economy inside the system.

Exemplified by telecom operators, enterprises inside the system are headed by a small network of bureaucratic-executive elites a short distance from the epicenter of power. Although the state authority has already thrust them into the global financial networks, creating outward-looking imperatives and practices in their info-tech businesses, central state bureaus, such as the state-owned Assets Supervision and Administration Commission and the National Development and Reform Commission, still have power to hold these state enterprises accountable to political and economic edicts. In contrast, network equipment and device manufacturing have been flung open to foreign and private capital. Also,

cyberspace has been quasiliberalized because cyber companies have used convoluted ownership structures to access global financial capital way above the legal cutoff—and the state has condoned such practices.

Along this commodity chain, the state has used its unevenly distributed regulatory power to make re-regulatory efforts. It uses its network ownership and planning power to facilitate industry policy intended for liberalized equipment and device manufacturing. A review of the period covered by the 12th FYP illustrates this mechanism. Infrastructure spending was a major priority. And the realm of communications was no exception, where infrastructure projects created obvious successes when state-led construction drives in the potentially mighty domestic markets served to outflank foreign giants and ultimately to support ensuing domestic business and technological catch-up and even leadership.

One exemplary project was next-generation mobile communications, which started in the 11th FYP and peaked in the 12th FYP. From 2009, during the period covered by the 11th FYP, the state succeeded in building the largest 3G mobile communications network with a China-only standard—an unwelcomed intervention in the Western-dominated global telecoms market. The payoff of promoting the China-only standard, a costly project, was the opportunity for Chinese operators and their supply chains to influence future technological evolution (Wang, 2014). In 2013, China, after having become the sponsor of one of the two variants of the global 4G standard, began to build the largest 4G networks in the world. Anticipating the coming 5G era in 2020, China was already acting to lead in 2016, responding actively to the International Mobile Telecom for 2020 and Beyond program intended by the International Telecommunications Union to define the 5G standard (Zhang, 2016). In April 2016, Huawei announced that its version of 5G had met the ITU standard and would begin commercialization in 2020.

The rising market power of nonstate cyber giants, however, has induced the state to create an alliance with them for enabling industrial policy. This is manifest in the China Next Generation Internet (CNGI) program initiated by the 10th FYP in 2003. At the heart of CNGI is Internet protocol version 6 (IPv6) as a substitute for IPv4, under which the United States has the lion's share of addresses (Lawson, 2006). "We will use it [IPv6] as a way to break through and be competitive in the global economic market," said Wu Hequan, vice president of the Chinese Academy of Engineering and chairman of the CNGI Expert Committee (cited in Worthen, 2006, para. 4). Although the transition has won the support of Alibaba, Baidu, and Tencent, the difficulty in transforming access devices, small ISPs, and numerous third-party applications on one hand and in boosting popularity among users on the other remain big hurdles (J. Hou, 2012).

Again, the strategy of orchestrating efforts along the commodity chain for commercializing domestic technologies and for making breakthroughs in crucial areas, such as 5G mobile communications, integrated circuits, basic software, and core components, is intended to play out in the 13th FYP period. During the run-up to the 13th FYP, the administration redefined telecom networks as the national strategic technological infrastructure, ratifying telecom operators' mission in assisting state science and technology interventions. This repositioning is expected to mitigate the corporate efficiency imperative, which is likely to conflict with the investment-driven network buildup necessary for industrial policy.



### **Internet-Based Economic Space: State–Capital Links in Flux**

In the 13th FYP, the state pledges to deliver a “digital China” marked as consumer-led, lighter, smarter, and greener, through networked ICT deployments in finance, production, public services, urban planning, and so on. The ascent of the Internet as a crosscutting lever for expanding new economic spaces is remarkable. The chapter on “building a modern system of Internet industries,” as the second task for “expanding the Internet-based economic space” (“The 13th Five-Year Plan,” 2016, p. 1) encourages ubiquitous deployment of networked technologies, a vision predicated on the Internet Plus strategy and, technically, on the Internet of things and cloud platforms, which are linked with wired and wireless networks, often using the same Internet protocol that connects the Internet. Although promising, forging the Internet-based economic space is likely to destabilize the existing power relations and even force the state and its affiliated sectors to sacrifice their own interests. Bound to create both winners and losers, this initiative therefore harbors conflict and uncertainty.

The Internet Plus strategy—emphasizing not only network connectivity but also the overhaul of information-service business—is expected to create a slew of new investment outlets. Having been designated by the 12th FYP as a focus of development, cloud computing is a hot spot. To gain advantageous positions in the emerging digitized economic ecosystem, various stakeholders have scrambled to build networked data centers, the facilities for cloud computing. China’s western provinces, including Chongqing, Guizhou, Heilongjiang, Sichuan, and Inner Mongolia, have leveraged their natural resource endowments to justify a construction boom, hoping to make west-to-east data transmission a reality. Between 2013 and 2015, about 250 data centers were slated for construction, including nearly 100 super-large and large ones (CAICT, 2016b).

Despite irrationality and even frenzy in the name of fostering the new economy (“Internet Data Centre,” 2015), the state’s determination to engineer new information-service markets has awed and attracted global IT giants. Although smart digital homes are slow to gain traction in Western countries, China’s large-scale manufacturing industry, under the banner of economic restructuring, seems ready to take up the industrial Internet of things and to create an insatiable market. Global IT giants are searching for footholds in this emerging market, but they now face domestic suppliers, from Huawei to China Mobile, that have scrambled to turn their connections and familiarity with local socioeconomic conditions into leading market positions (“Where the Smart Is,” 2016).

Another step toward creating Web-based ecosystems, wired by the Internet of things, supported by cloud computing, and virtualized in cyberspace, is the national big data strategy, which is the third task for expanding the Internet-based economic space. China is likely to enjoy an abundance of data as a factor of production. And the state holds sway on data-related policies. The data localization mandate, the mandate to “store, route, process, or otherwise use data within the territory of a country” (Brzytwa, 2015, para. 3), subjects data flows to national jurisdictional restriction. Local companies, from banks to taxi-hailing companies, operating in China are prohibited from storing and processing data in another country (Arnold, 2010; Vershelde, 2014). This has saved data centers in China from all-out competition from major U.S. providers but also has given rise to trade disputes.

The mode of data commercialization, however, hinges on state–capital interaction, which can be competitive and even contentious. The Chinese state controls a significant portion of data, approximately 80%, according to Premier Li (*Beijing Daily*, 2016), through its ministries, local governments, public institutions, mass organizations, and state enterprises. However, this state control cannot preclude imminent competition from nonstate sectors, which are far more versatile and aggressive. An overview can be illustrative: Although telecom operators have more than 50% of the market share in the Internet data center market, private and shareholding Internet companies have a larger market share in the infrastructure-as-a-service market (“The age of ‘Internet +,’” 2016). Presiding over powerful Web 2.0 platforms, cyber giants have self-generated gargantuan amounts of transaction-related data from their users, and they, Tencent and Alibaba in particular, have signed a slew of contracts with local governments to support local smart-city projects, setting eyes on becoming major gateways to public services and civic data (Xin, 2015).

After all, the gist of creating Internet-based economic spaces is to allow Web-oriented technological, business, and managerial models to infiltrate and transform various kinds of operations in the economy and social life, thereby creating new info-tech market demand. The contingent relationship between the state and cyber giants, entailing both contention and collaboration, is the fulcrum for change. On the one hand, cooperating with cyber giants is part of the statist task. After 2010, cyber moguls have gained membership in the National People’s Congress and the People’s Political Consultative Conference, thereby allowing them to weigh in on national policy making. On the other hand, investment restrictions and license requirements still limit nonstate capital in many coveted traditional sectors, including broadcasting, banking, and health care.

How cyber giants use their unprecedented influence to push change, and in what direction, are key. Regarding the new economy, the CEO of social media giant Tencent, for example, made five suggestions at the 2016 National People’s Congress. He wanted better Internet infrastructure, regulatory relaxation on the sharing economy, and a lower entry barrier for the Internet industry to build online personal medical files and to participate in graded diagnosis and treatment services (Xu, 2016).

So far, the central state is inclined to encourage Internet-enabled disruptive competition in hitherto state-monopolized sectors, prioritizing digital transformation over other political and economic imperatives. For example, one year after the Bank of China legalized Internet finance operated by nonstate Web companies in July 2015, the Ministry of Transport legalized app-based ride-hailing services through a provisional regulation. In comparison with the draft version for public review, the final version of the new regulation allows taxi-hailing services to be priced, in most cases, according to market signals rather than government stipulation and to sign up drivers flexibly with a variety of labor contracts and agreements (“Interim Measures,” 2015).

Still, contingency abounds in the state–business interaction shaping the new digital economy—and social forces are an intervening factor. As labor unrest in transportation, mostly against unfair competition registered by unlicensed cabs and ride-hailing applications, peaked at a six-year high in May 2016, local regulations specifying the state measure turned out to be more restrictive, requiring local

driver and vehicle registration to contain the disruptive impact and to turn taxi-hailing apps into “an advanced taxi-service control room” (Dong, 2016, p. 5) for traditional taxi industries.

### **Cyber Openness: A Capitalist International Relation**

The 13th FYP, specifically the section on expanding the Internet-based economic space, incorporates the national cyber strategy intended to turn China into a cyber power. The notion of cyber power refers to the technological, economic, and political abilities for both developing and managing far-reaching information networks (Hansen, 2014). As China is engaging with the outside world increasingly through the Internet, asserting cyber power is intended to safeguard what falls within the state’s purview and to challenge the existing international information order, including the architecture of institutions, principles, groupings, and standards.

Ultimately, as China’s Internet-based economic space is an extension of the global capitalist economy, China’s cyber strategy exemplifies the intertwining between territorial and capitalist logics of power in capitalist international relations and entails two parts: geopolitics that refers to the territorial and Westphalian aspect of state power in a purely political and military sense, and geopolitics of accumulation that the state engages in for the purpose of redistributing power and resources along the global info-tech commodity chains (Desai, 2015a). However, amid contention and power drift induced partly by the rise of China in the Internet age, the fusion of and contradiction between the territorial and capitalist logics are dynamic and cannot be taken for granted (Pratschke, 2015).

China’s ICT sector is entangled with global capitalism. Not only have major global supply chains moved to China, but the country has also grown into the largest national market for smartphones, PCs, and e-commerce (Whyman, 2014). As a result, China’s ICT sector is exposed to global market vagaries. During the economic downturn, the ICT sector has seen its overseas demand contracting. In the first six months of 2016, the first year of the 13th FYP period, the volume of ICT imports and exports fell 8.1% year on year. This decline swept all major product categories, including PCs, handsets, components, and telecom equipment (MIIT, 2016b). Downward pressure on corporate profits was also palpable. The profit-revenue ratio in the first half of 2016 slid down from the 2015 level, although major industries in the ICT sector, on average, downsized their workforces year on year by 4.7% (MIIT, 2016c).

In the face of slack overseas demand, the importance of the Chinese market has become indisputable—in 2015 more than half of made-in-China ICT output was sold at home. For domestic enterprises, dependence on domestic sales was much higher, at 81.5% (MIIT, 2016a). This means that the national cyber strategy, whether it be the measure for promoting ICT innovation or for building world-class digital infrastructures, is partly intended to stimulate domestic information consumption and to unleash domestic cyber market power. According to the “National Development Strategy Outline for Informatization for 2025” issued in July 2016, the Internet-based economic space is expected to roar ahead: Information consumption is to reach 6 trillion yuan and e-commerce 38 trillion yuan by 2020, both of which will then double by 2025 to 12 trillion yuan and 67 trillion yuan, respectively (“General Office,” 2016).

But efforts to expand the domestic market on behalf of transnational and domestic capital have to interlink with actions intended to deepen China's openness with the global cyber marketplace. As a recent example, in August 2016 the Ministry of Industry and Information Technology gave permission to Verisign to register .com and .net names in China. Although the country code top-level domain .cn has grown to have 16 million domain names, .com, the largest generic top-level domain, with 130 million registered domain names worldwide and 72.7% of the global market, has undeniable popularity in China. It drew 62% of growth from the Chinese market in 2015 and is now expected to further propel the expansion of China's cyber marketplace (CAICT, 2016a; China Internet Network Information Center, 2016; Verisign, 2016). Indeed, to turn China into a cyber power, the state does both things: With intent and action to reorganize and even command the global order, the state merged and continues to merge China's cyberspace into the transnational corporate-run cyberspace over the near and medium terms. This is a balancing act on a high wire, and we cannot yet know whether it will be successfully sustained.

ICT indeed has moved to the center of capitalist international relations (Black & Schiller, 2014). And with its growing power on this critical frontier, China is becoming a new epicenter of mounting geopolitical-economic contention centered on ICT. To enable capital accumulation, the Chinese state encourages extraterritorial investment and networking. In the 13th FYP, networking is part of China's efforts for "building new patterns of all-around opening-up" ("The 13th Five-Year Plan," 2016, section 11). The chapter on information networks mentions optimizing the layout of global networks, improving cross-border land and undersea infrastructures, building online silk roads between China and Eurasia, and accelerating the construction of the information harbor for China and the Association of Southeast Asian Nations. By 2014 Chinese companies in telecommunications accumulatively had made \$14.8 billion worth of foreign direct investment, and in 2014 alone China's outward investment in information transmission, software, and IT service amounted to \$3.2 billion (Ministry of Commerce, 2015). In 2015, to support the new wave of China-originated corporate expansion, cyber business leaders Tencent and Alibaba furthered business internationalization and set up one and three new data centers overseas, respectively (CAICT, 2016b). Significant but not huge as of recently, outward investment in networking and information services is likely to scale up in the 13th FYP period, which, in conjunction with the rising importance of the Chinese market, will create more pressure on China to open its own strategic sectors.

### **Cyber Security: Buttressing Territorial Logic?**

After the 12th FYP ratified the agenda of turning the majority of public cultural institutions into shareholding corporations, the 13th FYP refocuses the reform on creating an umbrella system of public opinion guidance. Its suggestion of using digital technologies and networks to support content provision as the core implies a preference for state media, after corporatization and Internetization, to command emerging digital communication ecosystems, including cyberspace. Its decision to deploy differentiated management in cyberspace indicates that state media will play an irreplaceable role in news provision, among other services, although nonnews content produced by either state or nonstate outlets will have considerable latitude. In July 2016, the United Front Work Department of CPC Central Committee, in a concrete move of cooption, established a new division to extend political guidance to new social strata, including new-media professionals (Sha, 2016).

Indeed, geopolitics is an important dimension of the national cyber strategy, which places priority on managing cyber culture and cyber security. But by no means does the state want to slow down the expansion of corporate media, corporate-run cyberspace, or cultural consumption therein. As the Internet has become the new gateway to news, entertainment, and value-added information services, the state deems improving the supply capacities of cyber culture critically important. To paraphrase President Xi, the direction and gravity of transnational information flows guides the flows of technology, finance, and talent, so a nation's control over information flows shapes its soft power and competitive capacity (Luo, 2015). Reflecting this strategic thinking, the 13th FYP continues to stipulate the rapid development of modern cultural industries, including online audiovisual entertainment, mobile media, animation and gaming, and digital publication. The goal: to create a commercially bustling information and communication hub that is more or less within acceptable political-cultural parameters.

If creating "positive and upright" cyber culture or building "clear and bright cyberspace" ("The 13th Five-Year Plan," 2016, section 14, chapter 68) are concerned with social stability and public opinion at home, the issue of cyber security, the fourth task for expanding the Internet-based economic space, contains a global thrust intended to enhance China's say on global Internet governance. In the 13th FYP, the section on openness has a chapter on actively participating in global economic governance, which includes cyberspace as an important operational domain for China's participation in global rule making, as important as sea, air, and polar land.

Still, the state faces a capitalist political economy. Since the establishment of the Central Leading Group for Cyber Security and Informatisation in 2013, the state's initiatives to expand its share of global sovereignty in the digital age have become concerted. But they faced serious pushback. As the Chinese leadership recognizes that "Internet security and informatisation are two wings of the same bird and two wheels of the same engine" (Hansen, 2014, p. 12), in August 2016 the Cyberspace Administration kick-started the process of foisting a statist notion of cyber security on the global Internet. The deep interweaving of global and domestic economies, however, forced the state to acknowledge and consult the global supply chains led by transnational corporate giants. For this reason, the Technical Committee 260 in charge of this new initiative incorporated Microsoft, Intel, Cisco, and IBM as members of the task force. It is still an open question whether the state can command them and align industrial standards set by the global technoeconomic network with national security standards or vice versa.

### **Conclusion**

China is a contending country in the capitalist world order. During its unmatched rise, the country is striving to expand its share of limited markets and to gain more technological capacities and governing power. Still, China, as a contender, is inflicted with structural contradictions resulting from its long-haul engagement with the global economy. The debt threat in the state-controlled banking system indicates that the vulnerabilities of the investment-export growth model also affect the state and its strategic sectors. To maintain its ruling legitimacy and to reduce ramifications of the economic downturn, the state is determined to guide economic restructuring and to restore better conditions for capital accumulation.

As is evident in the 13th FYP, the new administration expects ICT, as a set of complex and

interactive technologies, and the Internet industry, as a slew of Web-oriented technological, business, and innovation models, to crosscut and catalyze reforms and to help upgrade the quality and composition of China's economic growth. The rapid expansion of Chinese corporate-run cyberspace, along with the proliferation of Web-enabled ICT applications for agriculture, manufacturing, social services, and so forth, have prompted the state to deliberately prioritize the growth of the Internet-based economic space.

The Chinese state is also betting on the strategic importance of new digital capitalism in the unfolding global reshuffle of command. It is poised to regulate and even curb its own institutions and enterprises for accelerating digital capitalist development. But such action creates tension in the political economy of ICT. The state has to persuade its infrastructure-building network operators to continually support industrial policy on the one hand, and to absorb the cost of network buildup on the other. To foster the new economy, the state is designing measures to commercialize public data while legalizing disruptive competition brought by cyber giants in hitherto regulated social service sectors, including education, health care, and ride hailing. Above all, it is making a dangerous balancing act when prioritizing technology, innovation, and structural reforms on the one hand, and trying to contain disruptive impact on the already delicate labor and social relations on the other. The complex, evolving, and contingent bonds between the state and capital generate pushback, conflicts, and power drifts.

On the global scene, the Chinese state and its cyber strategy also contain profound contradiction and uncertainty. In the 13th FYP period, the Chinese state is likely to take modest steps toward diluting the power of the West, while continuing to merge, including Chinese cyberspace, with the existing global system despite constraints, compromises, and loopholes (Shield, 2013). In October 2016 the U.S. government gave up its oversight over the Internet Corporation for Assigned Names and Numbers (ICANN). However, the political economy of the global Internet is likely to remain largely unchanged—as ICANN fortified its sole authority over the global domain-name system and buttressed its multistakeholder model. Maybe the transition will open a global discussion about the appropriate process of selecting root name server operators, a possibility that China would prefer to see, but so far, the Chinese state has not only eased its resistance to the ICANN model but also has become an abiding member.

As China's outbound foreign direct investment is catching up with inbound foreign investment, incentivizing the internationalization of China's cyber business, the Chinese state grew and continues to grow more assertive in global rule making. At home, the state has stepped up, and its efforts to institute a domestic legal and regulatory framework are well underway. However, the globalized ICT supply chain, with a significant portion located in China, and the global Internet, a network not in line with national boundaries, both require the state to enlist transnational corporations and transnational institutions. Even when cyber security reflects the territorial logic of the state and can justify the protection of the domestic political economy, it likely ends up conceding and contradictorily reconciling with the capitalist logic of the cyber power strategy. As illustrated by the record fine that Chinese telecom equipment company ZTE agreed to pay to the U.S. government in 2017, the Chinese state's territorial power is dwarfed by the U.S. government's judicial power to enforce its (trans-)national security through export control over key communication technologies.

At the Hangzhou G20 meeting in September 2016, China, as the host country, extended its vision

for macroeconomic restructuring on the global stage. Echoing the 13th FYP, which outlines the state's prescription for curing the global economic slowdown of which China is a significant part, the G20 Blueprint on Innovative Growth further pledges to focus on innovation, structural reforms, the new industrial revolution, and the new digital economy, all key agendas intended to expand market space and to re-energize capital accumulation. Although we do not know yet whether the ideas introduced by the 13th FYP will become a Hangzhou consensus, China, as the largest contributor to global economic growth, when centering its vision on the Internet and ICT development, will have widespread implications. We can trust the Chinese state for its determination and prowess to pivot to a new digital economy, but we should also anticipate economic restructuring as such to create new social conflict, unexpected power shift, and inevitable geopolitical-economic struggle.

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