Due to the deterioration of China’s external environment in general, and its escalating tensions with the United States in particular, the Chinese government has readjusted its economic development strategy. As delineated in Beijing’s 14th Five-Year Plan, which was unveiled in mid-March of this year, China will invest in efforts designed to strengthen its economic security and better protect its economy from external economic threats. These initiatives include science and technology self-sufficiency, secure supply chains in its manufacturing economy, growth sustained by domestic demand, and food and energy security. Although these efforts seem attractive on paper, China will likely encounter immense challenges in trying to implement its new development strategy. Chinese leaders may have underestimated the potential costs of strengthening national security at the expense of global integration. Beijing’s disappointing records in executing industrial policy and rebalancing its economy also raise doubts whether it will be able to meet its ambitious goals.

At the conclusion of this year’s annual session of the National People’s Congress, the Chinese government unveiled its long-anticipated 14th Five-Year Plan (FYP). Although the principles guiding the new FYP were spelled out in the resolution of the plenum of the Chinese Communist Party’s (CCP) Central Committee at the end of October of last year, many crucial details in the FYP had not been revealed until the full text of the plan became public in mid-March. To be sure, the public version of the FYP still represents, at best, a sketchy blueprint of economic policy for the next five years. Turning this vision into reality will require further planning, calibration, bargaining, and, above all, effective implementation involving all the key stakeholders, such as the National Development and Reform Commission (NDRC), ministries, provincial governments, and state-owned enterprises. The most pronounced difference between the 14th FYP and its predecessors in the post-Mao era is the former focuses on national security. The reorientation of Chinese economic planning toward security is the outcome of Beijing’s grim reassessment of its external environment in general, and the onset of an open-ended and increasingly hostile geopolitical rivalry with the United States in particular.

In this briefing, we will highlight the most critical components in the 14th FYP that are conceived to enhance China’s economic and national security. The focus of our attention is on proposed guidelines and, in some cases, concrete steps to achieve technology self-sufficiency, strengthen the manufacturing economy and supply chains, implement the so-called “dual circulation” growth strategy, and protect food and energy security. Finally, we describe apparent

contradictions in the objectives announced in the plan and highlight some of the challenges China will face to achieve the goals laid out in the 14th FYP.

Achieving Technology Self-Sufficiency

The 14th FYP assigns the highest priority to increasing China’s scientific capabilities and achieving technology self-sufficiency. Placed immediately after the introduction to the plan that spells out the Chinese leadership’s assessment of the environment, guiding principles, and primary objectives of development, the first chapter, “Maintain Innovation-driven Development and Comprehensively Create New Advantages in Development” (坚持创新驱动发展 全面塑造发展新优势), proposes four sets of measures to strengthen the state’s strategic science and technology capabilities (强化国家战略科技力量), improve the technological-innovation capability of enterprises, create greater incentives for human talent to engage in innovation, and construct and improve the institutional mechanisms for scientific and technological innovation.

1. Strengthen the State’s Strategic Capabilities in Science and Technology

By affixing “strategic” to China’s capabilities in scientific and technological research, Chinese planners clearly signal that such capabilities are vital to the country’s long-term security. This objective is to be achieved through several prongs. The first is to reallocate resources for research. Specific measures include the building of new national labs and the restructuring of priority national labs. In the coming years these labs will play a leading role in developing China’s strategic capabilities in science and technology. In addition, new research universities and institutions will be built, while the government will encourage the re-allocation and sharing of resources among state-owned research institutions, universities, and enterprises.

2. Measures to Promote Research and Innovation

Chinese leaders realize that basic research is key to the success of developing the country’s scientific and technological capabilities. The 14th FYP commits to devoting at least 8 percent of total R&D spending to basic research. In 2019, according to the National Bureau of Statistics, China spent 133.5 billion yuan on basic research, accounting for 6 percent of total R&D spending. This implies that basic research in the coming years will receive at least 50 billion yuan per year if R&D spending rises from 2.23 percent of GDP in 2019 to higher levels. Since R&D spending rose from 2.06 to 2.23 percent of GDP from 2015 to 2019, when Chinese leaders felt much less strategic urgency, it is reasonable to expect a significantly faster pace of R&D spending in the coming decade. How China will realize its ambitions in basic research will be spelled out in a special “10-Year Action Plan for Basic Research,” which is to be formulated and implemented soon.

The government counts on large and well-established players to achieve scientific and technological self-sufficiency. Tax incentives will be employed to encourage Chinese

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companies to increase R&D activities. State-owned enterprises (SOEs) will be evaluated based on their R&D performance. Annual increases in R&D spending by SOEs must significantly exceed the national average. Large firms are supposed to play a leading role in innovation. The government will support “sector dragon-head firms” (行业龙头企业) to collaborate with universities, research institutions, and upper- and down-stream firms for the building of “national centers for industrial innovation” (国家产业创新中心) that are capable of taking on the state’s major scientific and technological projects.

As envisioned by the 14th FYP, the most important R&D activities will be concentrated in a small number of cities. The plan lists Beijing, Shanghai, and the Greater Bay Area of Guangdong, Hong Kong, and Macao as “international centers of scientific and technological innovation,” and it commits to building four “comprehensive national centers of science” (综合性国家科学中心) in four jurisdictions: Huairou in Beijing, Zhangjiang in Shanghai, the Greater Bay Area, and Hefei in Anhui. The difference between the two categories, however, is not specified in the plan.

Because China’s R&D ambitions hinge on attracting, developing, and fully utilizing talent, the 14th FYP also devotes a section to measures for talent development and recruitment. Most of these proposed measures are not new, with the exception of those designed to attract foreign talent. For example, the government will roll out more liberal immigration policies to encourage “high-end” foreign talent to work and conduct research in China and to obtain permanent residency. China will also explore skill-based immigration reform. Other measures to attract foreign talent include improvements in pay and benefits, social insurance, tax incentives, and quality education for children.

In addition to attracting foreign talent, China will also implement a plan for international collaboration that will maximize its advantage in generous funding for basic science. It will proactively design, lead, and initiate international projects in big science, establish research funding programs open to all countries, allow foreign scientists to assume positions in Chinese scientific and technological organizations, and support the establishment of international scientific and technological organizations inside China.

**Strengthening the Manufacturing Economy and Supply Chains**

In Part III, titled “Speed Up the Development of Modern Industrial Systems, Strengthen and Expand the Foundations of the Real Economy” (加快发展现代产业体系 巩固壮大实体经济根基), Chinese planners seek to achieve similar objectives that were laid out in 2015 in “Made in China 2025,” but without invoking the much-criticized term. The reason for giving such prominence to the manufacturing sector is almost certainly security. As Chinese leaders now fully understand that dependence on access to critical components made in the West, in particular the United States, poses unacceptable security risks, they are determined to make the necessary investments to mitigate these risks in the coming years. In realizing their vision of a self-reliant, secure, and competitive manufacturing economy, the Chinese government places particular emphasis on these measures.

1. Building Foundational Industrial Capabilities (加强产业基础能力建设)
The overarching concept here appears to be the development of all the foundational manufacturing capabilities China currently lacks. Under the rubric of “implementing the project of rebuilding the industrial foundations (实施产业基础再造工程), this project will accelerate efforts to build capabilities to produce “foundational components, software, materials, processes, and technologies.” The reference to “relying on dragon-head enterprises in sectors” (依托行业龙头企业) appears to suggest that large state-owned enterprises or leading private-sector firms will be favored in this endeavor. The pledge to promote the demonstrative adoption (示范应用) of first (indigenous) equipment, materials, and software also reveals an ambition to over time substitute existing Western-based foundational technologies with indigenous versions.

2. Strengthening Supply Chains
According to the new FYP, China-based supply chains will be strengthened through three approaches. The first will address current weak links with domestic or secure external suppliers through “international cooperation in industrial cooperation” (国际产业安全合作). Diversified supply chains will increase security. Another step is to rely on China’s advantages in scale, integration, and a small number of leading global sectors to further increase its competitiveness in the global supply chains for high-speed rail, electric power equipment, new energy, ship-building, and other sectors. Government policy will encourage companies to base the critical links of their supply chains inside China. To maintain cost competitiveness, China will also adopt policies to move supply chains to the central, western, and northeastern regions. Special efforts will be made to cultivate “leading enterprises” (领航企业), indicating the government’s intention to favor large and well-established players.

3. Building New Strategic Industries and a Digital Infrastructure
Chinese planners identify a set of strategic industries that will receive priority in the coming years. They include information technology, biotechnology, new energy, new materials, aviation and aerospace, new energy vehicles, and environmental protection. While this familiar list should not be surprising, two points merit our attention. The first is that the government will favor a “clustering” approach to develop these strategic industries. This implies that Beijing will select – and favor – a small number of regions as “clusters” of these industries. The second is that the FYP’s reference to the promotion of the wide adoption and application of China’s BeiDou Navigation Satellite System offers another confirmation of the leadership’s determination to construct a foundational system under its own control.

New digital infrastructure is another high priority. According to the FYP, 56 percent of Chinese households will adopt 5G by the end of 2025. China will also invest in high-capacity fiber optic networks, improve digital connectivity in medium and small cities in its western and central areas, accelerate the building of a nationally integrated big data system, and develop “industrial internet” and “vehicle internet.” In this process, it is again worth noting that the FYP stresses that China will formulate and develop (构建) its own standards for the equipment and components of its new digital infrastructure (新型基础设施标准体系).

4. Major Projects to be Undertaken For Improving Manufacturing Competitiveness
Most objectives mentioned in the new FYP are vague, but Table 4 of the document contains a list of specific projects that is illustrative of China’s aspirations in eight manufacturing sectors: new materials, advanced equipment and machines (examples include high-end machine tools and core technologies for nuclear power generation), robotics and smart manufacturing, jet engines, widespread consumer adoption of BeiDou, new energy vehicles and internet-connected vehicles, high-end medical equipment and pharmaceuticals, and advanced and specialized agricultural machinery.

“Dual Circulation” Driven by Domestic Growth

“Dual circulation,” China’s new growth strategy, rests on two pillars -- a vast domestic market providing the principal source of demand and growth, and linkages with the global economy fortified by China’s intrinsic economic strengths, mainly its market and supply chains. Part IV of the plan, “Building a Vast and Strong Domestic Market and a New Framework of Development” (形成强大国内市场 构建新发展格局), focuses on measures to improve efficiency, deepen regional economic integration, generate consumption-driven internal demand, and deepen external economic engagement. Although two short sections in this part briefly address “external circulation” – linkages with the global economy – the FYP devotes another part (Part XII) to policies that maintain and improve external economic ties.

1. Constructing a Vast and Strong Domestic Market That Will Drive Future Growth

Like its goal of technology self-sufficiency, the reorientation of growth toward domestic demand represents Beijing’s aspiration to reduce its reliance on exports as a driver of development. Termed “big internal circulation” (国内大循环), the new growth strategy consists of four categories of policies: balancing internal supply and demand; deepening integration of markets; bolstering consumption; and targeted public-sector investments.

(1) Balancing supply and demand

This policy merely reframes the so-called supply-side reform – improving the quality and type of supply to meet demands of increasingly sophisticated and affluent consumers. In particular, the Chinese government will promote so-called medium- to high-end consumer products and services (education, healthcare, and elder care). Special attention will be given to the use of markets and the legal system to reduce overcapacity and to the cultivation of high-end cosmetic, apparel, and consumer electronics brands.

(2) Integrating markets

By adopting the analogy of circulation, the Chinese government also hopes that more efficient “circulation” will generate gains that will contribute to growth. The 14th FYP pins hopes for efficient “circulation” on a series of reforms that, if successful, will allocate factors of production (mainly capital, labor, and land) to more efficient users. In particular, Chinese planners stress that the financial sector must serve the real economy, and the real-estate sector, an engine of growth for the past three decades, must maintain “stable and healthy” development. Integration of China’s vast internal market is the second prong of improving “circulation.” The 14th FYP attempts to achieve integration through reforms that address local protectionism, monopolies in
key sectors, fragmentation of markets, and the development and improvement of logistical infrastructure (such as distribution centers) and firms (modern logistic and delivery companies).

(3) Generating domestic demand

Upgrading and promoting household consumption will be the principal driver of domestic demand in the coming years. The 14th FYP identifies the consumption of services, such as education, healthcare, childcare, elder care, entertainment, and tourism, as key to increasing domestic demand. However, the policies listed in the plan to promote such consumption appear to be modest. Except for a vague reference to “appropriate increase in public consumption” (which would require more government spending on social services) and another reference to establishing a tax system to help consumers (减轻消费者负担的税收制度), the plan includes the following policies to promote consumption: holiday-related consumption, implementation of paid-vacations, extension of e-commerce to rural areas, building duty-free shops in cities, and strengthening consumer protection and quality control of consumer products.

Expanding the space for investment (拓展投资空间) is the second engine of increasing domestic demand. Despite its massive investment in infrastructure, China still has many unmet infrastructural needs, in public health, public safety, sanitation, and environmental protection. Investment policy will also favor large strategically infrastructure projects, such as the Sichuan-Tibet railway, a new land and sea transportation network in western China, a national water distribution network, and new hydroelectric projects in the down-stream of the Yarlung Tsangpo River in Tibet.

(4) External economic relations

While the center of economic gravity in the coming years will be domestic growth, China is not closing its doors to the outside world. Its leaders are convinced that strong domestic “circulation” will allow the country to maintain engagement with the outside world from a position of strength. Two paragraphs in the plan briefly spell out how China’s domestic “circulation” complements “international circulation.” (A separate chapter in the plan is devoted to policies to seek a “higher-level” opening to the outside world.) On the trade front, China will improve its trade regime to remove the barriers to promote imports of high-quality goods, advanced technology, and energy products from diverse sources. Simultaneously, China will promote the upgrading of its exports and will expand exports to new markets (mainly the developing countries). The goal is to maintain its global market share (稳定国际市场份额). On the investment front, Chinese policy will emphasize the improvement and protection of supply chains. This can be accomplished by encouraging foreign direct investment in high-end manufacturing, advanced technology, upgrading of traditional manufacturing industry, new services, and investment in the central and western regions. Additionally, foreign investment will be attracted by the opening of China’s telecom services, internet, education, culture, and healthcare sectors. To expand and embed China’s economic presence in the global economy, Beijing will encourage Chinese products, brands, technology, and standards to “go out.” In particular, China will support its companies to become embedded in global production and supply chains and to improve the capability of its companies to operate outside its borders (支持企业融入全球产业链供应链，提高跨国经营能力和水平).

Food, Energy, and Financial Sector Security
The FYP devotes one full chapter (Chapter 15) to national economic security and announces several initiatives to improve food, energy, and financial sector security. (By comparison, measures to improve economic security were dispersed in various chapters of the 13th FYP.) Like other initiatives proposed in the plan, measures to improve energy, food, and financial sector security are framed in general terms, with the exception of several mega-projects. Also notable is the relatively sparse space devoted to financial sector security and, in particular, the absence of references to measures to protect China against potential U.S. financial sanctions.

1. Food Security

The prominence Chinese leaders give to food security in the new FYP should not be surprising because imported grains (more than 100 million tons per year since 2014) equal roughly 15 percent of domestic grain production (670 million tons in 2020). The basic strategy to enhance food security is by preserving sufficient farmland (a minimum of 1.8 billion mu, equivalent to 120 million hectares) and by developing advanced agricultural technologies (in particular, high-yield seeds). Although imported seeds (mainly from the U.S.) accounted for only 3 percent of the domestic seed market in 2018, the Chinese government is concerned that in the future the supply of high-yield seeds might become weaponized by the U.S. Food security will also be increased through domestic conservation measures, the cultivation of large agribusiness groups, China-owned global grain conglomerates, and the promotion of diverse sources of imports. In terms of large-scale projects, China will invest in large “high-standard” grain storage facilities.

2. Energy Security

At first glance, measures proposed in the 14th FYP to strengthen energy security appear to be at odds with China’s ambitious climate goals. The principal strategy to maintain energy security is, to quote the FYP, to “rely on domestic sources, address deficiencies, seek diversity in supplies, and increase reserves” (坚持立足国内、补齐短板、多元保障、强化储备). In terms of secure domestic supplies, the FYP declares that a “a minimum level of a secure supply of coal supply must be achieved and core supplies of oil and gas must depend on self-protection” (实现煤炭供应安全兜底、油气核心需求依靠自保). Specific measures include expansion of the scale of oil and gas storage (扩大油气储备规模) and strengthening the construction of coal reserve capacity (加强煤炭储备能力建设). In addition, China will cultivate its own energy trading exchanges and pricing mechanisms, promote the use of Renminbi in energy trading, and implement a new round of strategic actions to find new energy and mineral sources (实施新一轮找矿突破战略行动). Chinese planners do not consider clean energy to be part of the energy

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4 Li Xuanmin and Li Sikun, “China Should Strengthen Genome Editing and GM Seeds to Break Western Monopoly, Ensure Food Safety,” December 29, 2020, https://www.globaltimes.cn/page/202012/1211323.shtml#:~:text=China%20has%20been%20fac ing%20an%20under%20the%20shares%20of%20homegrown%20seeds.&text=China%20s%20grain%20self%20Ds ufficiency%20rate%20is%20about%2085%20percent
security equation even though clean energy, which receives extensive treatment in Part III, Chapter 11, is seen to be part of China’s new infrastructure (non-fossil energy sources, such as nuclear, solar, wind, and hydro are supposed to provide 20 percent of China’s total energy supply by 2025, from 15 percent in 2019). Examples of mega-projects to improve energy security listed in the FYP include exploration and development of oil and gas fields in Sichuan and Xinjiang, investment in shale gas projects, coal-to-liquid conversion projects, and active exploration of energy and mineral resources in 100–200 promising areas.

2. Financial Security

Financial risks, according to the FYP, are predominantly concentrated within China. Improving financial security thus demands more vigorous enforcement of regulations. The measures proposed to address financial sector risks do not contain anything new. Since the U.S. has recently increased the use of financial sanctions against its adversaries, one might expect the FYP to propose defensive measures to deal with this potential threat (so far only a few companies involved in oil trade with Iran and Chinese officials involved in the crackdowns in Xinjiang and Hong Kong face U.S. financial sanctions). But the FYP contains no such measures or proposals. It merely reiterates China’s well-known policy of promoting the construction of a cross-border payment system using the Renminbi (加强人民币跨境支付系统建设).

**Contradictions and Challenges**

The 14th FYP mainly articulates the aspirations of the Chinese government. Except for its emphasis on national security, most of the goals spelled out in the plan are not new. They have been on Beijing’s wish-list for a long time. Although it is tempting to call the 14th FYP a national security economic strategy, it is perhaps more appropriate to characterize it as a repackaged and rebranded development strategy that seeks to meet the needs of the top leadership to respond to a dramatic deterioration in China’s external security environment. As such, the 14th FYP is an intriguing document that seeks to thread the needle: prioritizing security without sacrificing growth. If we compare this 63,000-character document with the 13th FYP (with nearly 66,000 characters), we find a significant amount of overlap between the two plans in terms of purely developmental objectives. Where they differ substantively, if not fundamentally, is in their assessment of the external environment and the policy response required by the changes in the external environment.

A better understanding of the 14th FYP may be obtained if one reads it alongside Xi Jinping’s speech at a meeting of the Central Financial and Economic Affairs Commission (中央财经委员会) on April 10, 2020. It seems reasonable to argue that the drafters of the 14th FYP added security-specific sections and repackaged and reframed development policies to accommodate Xi’s call to emphasize security in economic development – without resolving potential conflicts or explicitly addressing likely trade-offs. If this should be the case, the process of turning this

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5 Data on China’s 2019 total energy supply is from [https://www.eia.gov/international/analysis/country/CHN](https://www.eia.gov/international/analysis/country/CHN)

framework document into policies that can be implemented in the real world will likely be a difficult one requiring many compromises.

Among potential conflicts, the most important one is how to balance between maintaining openness and increasing security. For most of the post-Mao period, Chinese leaders accepted less security in favor of greater efficiency through integration with the global economy. The result has been sustained growth. Orienting the Chinese economy away from integration to security will almost certainly result in a substantial loss of efficiency. Security requires severing or limiting ties with the most efficient producers and pouring resources into sectors where China does not have comparative advantages. In addition, Chinese leaders seem oblivious to external responses to their reorientation. It is a given that as China seeks more self-sufficiency in advanced technology, its actions will force existing supply chains to adjust, mostly by bypassing or reducing dependence on China. In all likelihood, the loss of efficiency from less integration with the global economy and its supply chains will be substantial.

In addition to the contradictions inherent in the 14th FYP, China will face serious challenges in implementing this ambitious plan. The process of translating a framework document such as this FYP into a large number of specific policies and plans will necessarily involve more stakeholders and influential interest groups in the Chinese party-state, such as ministries, provincial governments, state-owned enterprises, and state-affiliated research institutions. Understandably, each stakeholder will seek resources and beneficial terms rather than trying to help the government realize its goals, as laid out in the FYP. The allocation of resources will likely be determined by political influence, not by economic logic or merit. The interests of local governments diverge significantly from those of the central government. They will see Beijing’s national security priority as another opportunity to gain coveted resources for local projects. We should not be surprised if they rebrand and repackage economically dubious local projects to be essential to security. If past experience serves as a guide, inevitable compromises among these stakeholders will tend to result in dispersion of funding, dilution of efforts, and suboptimal outcomes.

Particularly problematic is the preference given to large firms (mostly SOEs) and state-affiliated institutions in China’s efforts to seek technology self-sufficiency and innovation. These incumbents have a disappointing record of fulfilling ambitious objectives of indigenous innovation and technological progress. (The most innovative Chinese firms today are invariably private.) Besides providing them with more resources, the FYP offers no reassurance that they will deliver better outcomes.

Equally daunting will be the formulation and implementation of reforms to boost domestic demand, which rests on rising household income. The Chinese government has been talking about this rebalancing act for more than a decade, but progress has been modest at best. According to the National Bureau of Statistics, household consumption accounted for about 49 percent of GDP in 2001, fell to 40 percent in 2010, and recovered to 44 percent in 2018. Raising household consumption requires higher household income. One way of achieving higher

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household income is to increase productivity (hence, wage income). As the Chinese economy makes the transition from a manufacturing-based economy to a more service-based economy, productivity increases will be more difficult and slower. The other approach to raise household income is to increase government spending on services (such as healthcare and education) so that households can spend the money saved from paying for these services. The third approach is to cut taxes on the average Chinese and offset the revenue loss by raising taxes on the wealthy. However, the 14th FYP does not provide specific policy prescriptions for raising household income.

The last hurdle for the successful implementation of the 14th FYP is China’s resource constraints. Although the Chinese economy is expected to sustain growth in the range of 5–6 percent in the coming decade, the demand on government resources will rise significantly. Spending on healthcare and pensions will grow rapidly due to the aging of the population. Increasing household income to boost consumption will entail either tax cuts or increased public spending. Strengthening economic security will require massive investments in R&D and technology self-sufficiency, dependable food supplies, and storage of strategic energy resources – while Beijing must also increase military spending to remain competitive in its arms race with the U.S.

These tough questions are left mostly unaddressed in the 14th FYP – for good reason. The plan most likely serves less as a practical guide to economic development than as an instrument of strategic messaging. President Xi Jinping and his fellow Politburo members probably understand that they need to reassure the Chinese people that there is a solid plan in place to wage a protracted geopolitical struggle with the U.S. Externally, such a plan signals China’s resolve. However, if Chinese leaders believe that they have produced an economic plan in the 14th FYP that will allow them to achieve sustained growth and improve national security without trade-offs, they may need to think again. Ironically, if China actually succeeds in achieving the ambitious national security goals in the 14th FYP, it may well be a Pyrrhic victory. Its economy would be more decoupled from the rest of the world and its indigenous technology would be bedeviled by the Galápagos syndrome – isolated from the rest of the world. Overall efficiency of the Chinese economy would also likely be lower because prioritizing national security implies involuntary allocation of resources to sectors in which China lacks comparative advantages.

U.S.-China strategic competition may only be three years old, if one counts the opening shots of the trade war in June 2018, but the U.S. seems to have accomplished a vital strategic objective. Washington’s weaponization of trade and technology has succeeded in forcing China to start taking steps that will most likely make its economy structurally less efficient in the long run. If China continues down the path laid out in the 14th FYP, it will more likely be the losing side in the geopolitical rivalry of the 21st century.

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