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CHINA 2049: ECONOMIC CHALLENGES OF A RISING GLOBAL POWER

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EDITOR'S NOTE

The following is drawn from the executive summary of the forthcoming edited volume "China 2049: Economic Challenges of a Rising Global Power" (Brookings Institution Press, May 2020). The book is the outcome of a joint research project between economists at the National School of Development, Peking University, and the Brookings Institution.

EXECUTIVE SUMMARY

China is on track to be the world's next economic superpower, but it faces tremendous challenges, such as fostering innovation, dealing with an aging population, and coping with a global environment skeptical of a more powerful People's Republic. This policy brief draws from a forthcoming edited volume — "China 2049: Economic Challenges of a Rising Global Power" (Brookings Institution Press, May 2020) — which is the result of a collaborative effort among economists from China's Peking University and the Brookings Institution. The book will offer in-depth analyses of these challenges and explore a number of essential questions: Does China have enough talent and the right policy and institutional mix to transit from an input-driven to innovation-driven economy? What does an aging population mean for the country in terms of labor supply, consumption demand, and social welfare expenditures? Can China contain environmental and climate change risks? How should the financial system be transformed in order to continuously support economic growth and keep financial risks under control?

The book contributors, listed in the appendix of this policy brief, also consider the roles state-owned enterprises play in the future Chinese economy, how technological competition between the U.S. and China will affect each country's development, China's future role in the international monetary system, and whether the U.S. and other established powers will accept a growing role for China and the rest of the developing world in the governance of global institutions such as the World Trade Organization and the International Monetary Fund.

"China 2049" will provide unique insights — summarized here — into independent analyses and policy recommendations by a group of top Chinese and American scholars. Whether China succeeds or fails in economic reform as it moves toward the 100th anniversary of the Communist revolution will have a large impact not just on China's development, but also on stability and prosperity for the whole world.

In 2012, the Chinese government announced "Two Centennial Goals." The first is to double the 2010 gross domestic product (GDP) and per capita income for both urban and rural residents by 2021, the year when the Chinese Communist Party (CCP) celebrates its centenary. And the second is to build China into a fully developed country that is prosperous, powerful, democratic, culturally advanced, and harmonious by 2049, the year when the People's Republic of China (PRC) celebrates its centenary. It appears that China is well on track: It has already achieved the first Centennial Goal, as its GDP grew by 7.4% per annum between 2010 and 2018, and it aims to eliminate poverty completely by 2020.

There are greater uncertainties, however, surrounding the path to the second Centennial Goal. China ascended successfully from one of the world's poorest economies in 1978 (with GDP per capita at less than $200) to a high-middle-income economy in 2018 (with GDP per capita close to $10,000). And according to projections in the forthcoming edited volume "China 2049,"[1] under reasonably favorable conditions, China's GDP per capita — using purchasing power parity (PPP) measures — relative to that of the United States may rise from about one-quarter in 2018 to around two-thirds in 2049. However, the growth trajectory in reaching the middle-income level and that in achieving the high-income status could differ significantly, viewed from key growth drivers and internal and external constraints for growth.

The purpose of this report is to take stock of the new economic challenges for China when it sets out to achieve the second Centennial Goal over the coming three decades. While the various chapters in the forthcoming edited volume examine the transformation of different sectors and aspects of the economy, they focus on the central theme of China becoming a new global economic power. Specifically, these analyses seek to address three common questions: One, what contributed to China's past economic success? Two, what are the most important new challenges for China and the world as China continues to ascend in the coming decades? And, three, what policies should China adopt to both facilitate rapid growth of the Chinese economy and accommodate it in the global system?

KEY DRIVERS OF PAST ECONOMIC GROWTH

After establishment of the PRC in 1949, the Chinese government adopted various policy schemes trying to modernize the economy, including the socialist transformation program and the urban industrialization strategy, starting in the mid-1950s. While paces of economic development were, at times, decent and even remarkable, the central planning system was largely unsuccessful in boosting income levels during that time. This eventually led to the starting of economic reform from the end of 1978, which dramatically improved economic performance. Real GDP grew by an average of more than 9.8% during the period of 1978-2008, which was often referred to as the "China miracle."

China was one of the main beneficiaries of globalization.

So what contributed to this economic success during earlier decades of economic reform? The foremost driver was the reform policy, or transition from the centrally planned system to a free market economy. This transformation significantly increased both allocative efficiency, through better allocation of resources, and technical efficiency, through better use of resources in the same production activities. Adoption of a household farming system in the countryside in the early 1980s, for instance, led to immediate jumps of grain output, as the new scheme helped establish a direct link between efforts and rewards. Again, migration of rural surplus labor to urban areas both raised average labor productivity and supported expansion of industrial production. According to analysis in the forthcoming "China 2049," improvement in total factor productivity

(TFP) roughly accounted for about four-tenths of China's GDP growth in the period of 1996-2015.

A related factor was the open-door policy or rapid integration of the Chinese economy into the world. The start of China's economic reform coincided with the wave of globalization. The combination of the two processes enabled China to participate deeply in the international division of labor. Relying on its low-cost advantage, China quickly rose as one of the world's major exporters, especially in markets for labor-intensive manufacturing products. The ratio of exports to GDP increased from well below 10% in 1978 to 37% in 2007. And for almost two decades starting from 1993, China was among the world's largest recipient countries of foreign direct investment (FDI). Its accession to the World Trade Organization (WTO) at the end of 2001 not only further reduced China's trade and investment barriers but also accelerated domestic structural reforms. In short, China was one of the main beneficiaries of globalization, especially during the first three decades of economic reform. And the world economy provided to China export markets, investment funds, and production technologies.

Several other factors also played critical roles supporting China's successful economic development, and these include favorable demographics, high saving and investment rates, macroeconomic and financial stability, and economic foundations built during the pre-reform period. During the reform period, China experienced two waves of improvement in demographic structure, which generated the so-called "demographic dividend": the first one (1976-90) coincided with the starting of economic reform, and the second one (2000-10) coincided with China's WTO accession. Both helped accelerate economic growth. The high saving rate during the reform period was probably attributable to a number of causes, such as the life-cycle hypothesis (i.e. that the saving rate was proportional to the GDP growth rate), favorable demographics (lower dependency ratio), common East Asian culture (or at least behavior), and even lack of well-developed social welfare systems (precautionary saving). A high savings rate led to a high investment rate, which, in turn, facilitated both capital accumulation and technological progress.

With exceptions of several years in the mid-1980s and early 1990s, China largely maintained macroeconomic stability, evidenced by low levels of volatilities of growth rates, inflation rates, and external account imbalances. And during the past four decades, China was the only major emerging market economy that did not suffer from a serious financial crisis. Stable macroeconomic and financial conditions increased investor confidence and improved economic efficiency. And finally, while the growth record of the pre-reform period was quite poor, physical infrastructure, a comprehensive industrial base (especially the heavy industries), and relatively high levels of human capital and gender equality during that time all laid good foundations for economic development after 1978.

UNDERSTANDING THE REFORM POLICY

Alongside the remarkable economic performance, it appears puzzling that, after four decades of economic transition, China's economic policy still looks quite different from the free market system. For instance, while the share of the state-owned enterprises (SOEs) in total industrial output dropped from 80% at the start of the reform to 20% in recent years, SOEs still dominate in many important economic areas, particularly in some service sectors and upstream industries. Again, the government still intervenes heavily in almost all aspects of the financial system, including interest rates, exchange rate, fund allocation, and cross-border capital flows. Among 130 economies with available data in 2015, China's financial repression index — or degree of government intervention in the financial sector — ranked 14th. Compared with free market economies, the Chinese government still plays much more direct and proactive roles. Scholars criticize some of these policy distortions for causing significant inefficiency and increasing risks. And some government interventions are also at the center of the current China-United States trade disputes.

So why didn't the Chinese government eliminate such policy distortions and move toward the free market economy more rapidly? To understand the rationale of such policy interventions, one needs to go back to the reform strategy adopted at the beginning of economic reform. The former Soviet Union and the Eastern European transitional economies followed the so-called "shock therapy" approach — in other words, the governments dismantled the central planning system and privatized the SOEs at the very start of reform. Unfortunately, such a reform strategy often caused the initial collapse of output and even social instability, because an economy cannot jump to the market system over night. Market mechanisms take years to develop. In contrast, China implemented the so-called "dual-track" gradual reform strategy, i.e. the government continued to support the SOEs while creating more favorable conditions on the margin for non-SOEs to expand. This approach could suffer from potential efficiency losses, because SOEs are generally less efficient, but it ensured economic and social stability during the transition period.

This "dual-track" reform strategy led to the unique phenomenon of "asymmetric liberalization" between product and factor markets in China: The government almost completely liberalized the product markets, where prices are freely determined by demand and supply. In markets for production factors such as capital, land, and energy, government interventions remain widespread and heavy. Such interventions are actually effective ways of supporting the relatively less efficient SOEs, at least in the initial period. For instance, the state-dominated commercial banks continuously allocated large volumes of cheap bank loans to the SOEs. Therefore, many of the policy interventions were actually parts of the arrangements to support the "dual-track" strategy.

Such seemingly inefficient policy distortions, however, did not prevent China from achieving both rapid economic growth and basic financial stability during the reform period. On the one hand, the degree of government interventions was actually on the decline, albeit at slower pace than in other transitional economies. For instance, the financial repression index dropped from 1.0 (almost completely centrally planned) in 1980 to 0.6 in 2015 (roughly half-way through financial liberalization). On the other hand, some policy interventions even played positive economic roles. Again, the SOEs often supported the government's efforts to stabilize the economy, alongside the fiscal and monetary policies. And, according to analyses of the study in the forthcoming edited volume "China 2049," repressive financial policies actually raised GDP by 0.8 percentage point in the 1980s in China, through effective conversion of savings into investment and support to investor confidence. If the market system is not well developed, then perhaps a certain degree of government intervention could be favorable.

The key lesson from China's reform experience is that we shouldn't view policy distortions through ideological lenses.

The key lesson from China's reform experience is that we shouldn't view policy distortions through ideological lenses. On the one hand, all government interventions have both positive effects and negative effects, and decisions on policy reform should be determined by cost-benefit analyses. A lot of the earlier policy distortions were results of the "dual-track" reform strategy, the main purpose of which was to ensure smooth transition of the economy. But under certain circumstances, government interventions can make positive contributions to economic performance. It's easy to imagine that such situations could occur not only in transitional economies, where the market mechanism is generally under-developed, but also in developed economies, where "market failure" problems are also common. Were China to liberalize its financial system completely in 1978, it would, most likely, have already suffered from a number of financial crises in the decades that followed.

On the other hand, it is still important to remember that the most fundamental contributor to China's economic success during the reform period was the "liberalization policy," not the "control policy." During the 40 years between 1978 and 2018, the Chinese economic system converged steadily to the free market regime — although paces of such convergence varied in time, sometimes fast, sometimes slow. Because the cost-benefit dynamism of policy distortion changes over time, the government has to formulate timely and flexible policy responses. The latest development suggests that policy distortions in favor of the SOEs are now imposing very high costs on the economy. For instance, according to the analysis of the forthcoming volume, the net effects of repressive financial policies on China's GDP growth already turned from positive in the 1980s and the 1990s to negative in the 2000s. These imply that further SOE reform and financial liberalization should be both urgent and desirable.

NEW ECONOMIC CHALLENGES

In retrospect, the onset of the global financial crisis marked an important turning point in China's macroeconomic performance. Before 2008, the Chinese economy sustained rapid economic growth, and maintained basic financial stability but suffered from serious structural imbalances. After 2008, the economy was hit by persistent growth slowdown, and witnessed rising systemic financial risks but also experienced important structural rebalancing. One might describe the post-crisis economic features as important parts of the "new normal," although this transition is still ongoing and may take decades to complete. The "new normal" is a complex phenomenon but the key takeaway is quite straightforward: The future growth trajectory will be very different from past experience. And this change was likely underpinned by a number of new trends.

The first important challenge is the transition of the growth model from input-driven to innovation-driven. For several decades during the reform period, China enjoyed low-cost advantages. As long as large numbers of farmers continued to flow from the countryside to the cities, labor cost could stay low and manufacturing could continue to expand rapidly. However, now rural surplus labor is almost exhausted and per capita GDP is already close to the high-income level, China has to rely on industrial upgrading to continue economic growth. This is the so-called "middle-income challenge." As China already lost its low-cost advantage, both the proportion of exports to GDP and the share of industry in GDP are already on the decline. The growth model has to switch from input-driven to innovation-driven. And the key question is: Can China innovate?

Building innovative capability is the result of coordinated efforts in several areas. One is the accumulation of human capital. While Chinese universities produce millions of students majoring in sciences and engineering every year, the average education level of the 300 million migrant workers is junior high school. The latter fact could be particularly troublesome, as there could be a significant mismatch between future labor demand by increasingly more sophisticated industries and labor supply in the form of unskilled workers. Another is financial services suitable for supporting innovation, as the current bank-dominated financial system appears more capable of supporting extensive manufacturing expansion. A third is protection of intellectual property rights, which is also at the center of China's ongoing trade disputes with several trading partners. And a fourth is the big question about appropriate industrial policy. The commonly applied government subsidies and picking-the-winner approach are often not effective and are, sometimes, even counterproductive.

The second important challenge is population aging. At around 2010, the second wave of the "demographic dividend" gave way to population aging: That is, a period in which the dependency ratio was falling to a trough of around 36% was replaced by an era in which it will be rising. This was probably also one of the drivers behind persistent growth slowdown after 2010. But the process of aging is only starting. According to projections in the forthcoming "China 2049" volume, the dependency ratio — which measures the proportion of non-working-age population to total population — could rise to 66% in 2049, while the working-age population could shrink by about 170 million in absolute terms between 2019 and 2049. Population aging, especially "getting old before getting rich," could have serious consequences for the Chinese economy in the coming decades: declining labor supply, weakening consumption demand, rising need for elderly care, and widening funding gaps of social security systems.

Fortunately, analyses of this study also point to some potential ways of responding to some of the challenges posed by population aging. Adoption of artificial intelligence (AI), for instance, could potentially substitute for 280 million workers during the coming three decades, which is more than enough to offset the potential decline of the working-age population as a result of aging. Interestingly, AI has larger substitution impacts on female, old, low-skilled workers. Similarly, continuous urbanization may also help mitigate weakening consumption demand as a result of aging. Currently, per capita consumption in urban area is, on average, more than double the per capita consumption in rural area. If China's urbanization rate could rise from 56% in 2015 to 80% in 2049, which the United Nations has predicted, aggregate consumption demand could continue to expand at robust paces in the coming decades. Perhaps, the greatest difficulty caused by aging is the rapidly widening funding gap of social security services. Given that the dependency ratio will rise dramatically in the coming decades but the social security system is not well funded, the macro-level tax burden of the Chinese economy will likely rise in the future.

The third important challenge is de-globalization. While China was one of the greatest beneficiaries of globalization during the past decades, it's almost impossible for external markets to play the same role as in the past for several reasons. On the one hand, China already rose from a small-country economy to a large-country economy. Today, whatever China buys, the commodity becomes more expensive; and whatever China sells, the commodity becomes cheaper. In other words, the "spillover effects" from China's economic policies and activities are already significant enough to induce significant reactions from other countries. On the other hand, the trend of globalization has already reversed since the global financial crisis. This was because, while improving overall efficiency, globalization also caused pain because of the shifts of economic activities. Certain social groups were hard-hit, in the form of job losses. And there was a backlash against globalization, as illustrated by the election of Donald Trump in the United States and Brexit in the United Kingdom. At least in the foreseeable future, the global market is likely to stay less open than before.

There is also a new dimension of economic tension between China and the United States, or between an emerging and an existing power. China's international economic policies contain two important directions. One is opening the Chinese economy to the outside world, especially the service sector. While China probably fulfilled most of the commitments it made upon WTO accession, the standards of openness look low relative to China's new level of development and its size in the world economy. The trade friction raises a new question as to whether China's economic policy would continue to be outward-oriented or would turn inward-looking. The other direction of economic policy is participation in international economic governance, including in the WTO and the International Monetary Fund (IMF). China is also pushing its own international economic agendas, such as internationalization of renminbi (RMB), the Asian Infrastructure Investment Bank (AIIB), and the Belt and Road Initiative (BRI). An important question is whether China and the U.S. can reach an accommodation to work together to reform global governance, or whether the two are destined for economic and strategic conflict. It is too early to tell how the external economic environment will look and what the exact consequences on the Chinese economy will be.

In addition to the above three challenges, there are several other important changes that China will have to face in the coming decades. One of them is environmental and climate challenges. During a large part of the reform period, China maintained relatively lax environmental standards, which probably also boosted the pace of economic growth, to a certain extent. It also helped create the so-called "pollution haven" phenomenon after China opened up to the outside world. This was largely evident as exports, pollution, and carbon emission all grew at extraordinary paces in the years following China's WTO accession at the end of 2001. In return, China's environmental degradation was also very severe, which has already imposed heavy welfare losses on China. Economic studies suggest that the costs of environmental degradation and resource depletion in China approached 10% of GDP in recent years, of which air pollution accounted for 6.5%, water pollution 2.1%, and soil degradation 1.1%. Water and air pollution are also important causes of illness. Therefore, without seeking a low-carbon and greener path, China's growth model is no longer sustainable. Other things being equal, higher environmental standards could also lead to slower GDP growth, as it is conventionally measured. All these challenges will likely exert significant influence on the Chinese economy in the coming decades, including the pace, composition, and quality of economic growth. A higher level of dependence on innovation, a rapidly aging population, a less open international economic environment, and a greener and lower-carbon development path all point to a slower pace of economic growth and an entirely different growth model. A lot of economic skills that China accumulated during the past four decades might not be as effective as before, or even useful going forward. For instance, out of the three components of economic growth on the demand side — consumption, investment, and net exports — China relied almost exclusively on the latter two in the past. But this growth model is no longer sustainable.

POLICY RECOMMENDATIONS

According to forecasts in our forthcoming "China 2049" volume, China's economic growth rate will probably slow to 2.7-4.2% in 2049, with its GDP per capita rising to about two-thirds of that of the U.S. in the same year. If these projections turn out to be moderately accurate, then China would achieve several important goals between 2019 and 2049:

- Overcoming the "middle-income trap" by successfully reaching high-income status;
- Becoming the largest global economy; and
- Achieving the government's second Centennial Goal of becoming a moderately developed economy.

China's years of continuous 10% or even 8% economic growth are over, permanently.

An immediate takeaway from this projection is that the growth slowdown will likely persist for a very long time. It's not a pure cyclic fluctuation as some believe. Before the global financial crisis, the Chinese government frequently relied on macroeconomic policies, such as fiscal and monetary measures, to stabilize economic growth. And that counter-cyclical policy was often quite effective. But it is now different: Growth slowdown, from above 10% in 2010 to below 7% in 2018, was driven mainly by structural, not cyclical, factors. China's years of continuous 10% or even 8% economic growth are over, permanently. Government officials and private entrepreneurs should be prepared, both psychologically and economically, for this long-term decline of growth rates.

But even these slower growth rates may not be automatically guaranteed. Many developing countries were stuck in the "middle-income trap" for decades, and Japan suffered from a period of economic stagnation. Several studies reveal that China's TFP and capital efficiency declined dramatically after 2008. The projections in "China 2049" are based on roles of economic openness and demographic structure in explaining China's economic convergence to the United States. The underlying assumption is that China has to continue improving productivity in order to attain even the projected lower rates of economic growth. This is why the government is shifting its policy focus from demand-side counter-cyclical measures to supply-side structural reforms.

In "China 2049," we make a set of policy recommendations for China to continue a robust pace of economic growth over the next three decades.

1. Ending the "dual-track" reform approach and realizing competitive neutrality for SOEs and private enterprises

It is time to call an end to the "dual-track" reform strategy, which was a transitional arrangement initially, and to complete the transition to the market economy. Enforcement of competitive neutrality, particularly through the SOE reform, could be a central step in achieving the above objective. First, the government should clearly specify the narrowed role and scope of SOEs. With exceptions of a small number of "strategic industries," wherever the private sector can do well, then there should be no reason to maintain significant presence of SOEs. Second, the government should try to create a level playing field concerning entry, competition, and exit. It should resist frequently calling for SOEs to fulfill policy responsibilities. Whenever needed, the government should buy such services from the SOEs on market terms. And, third, as owners, government agencies should optimize capital management and supervision of SOEs. They should focus more on investment returns to state-owned assets, instead of interfering in the daily operation of the enterprises.

2. Abandoning birth restrictions and building good baby- and elderly-care facilities to cope with negative consequences of aging

Rapid aging looks inevitable now, regardless of new policies. The government, however, can carefully devise some policy schemes to mitigate the pains. First, it should introduce some measures to encourage fertility, including economic support, childcare services, medical security, and promotion of female employment, in addition to a complete removal of birth restrictions. Second, it should take steps to strengthen human capital accumulation by expanding education and training resources and increasing inputs in health. Third, it should make efforts to improve the pension system and establish a more flexible retirement mechanism. A multilevel pension insurance system, as well as postponement of the legal retirement age, should be helpful. And finally, government policy should also focus on developing long-term care services. For instance, home- and community-based services, rather than simply institutional care, might be favored by the Chinese elderly.

3. Improving innovative capability through human capital accumulation, intellectual property protection, and sensible industrial policies

To a large extent, the issue of growth sustainability boils down to the question of innovative capability. First, accumulation of human capital becomes even more critical. This includes not only education of scientists and technicians but also training of unskilled workers. Second, the government may: on the one hand, try to establish a more effective research and development (R&D) system through greater public and private spending, as well as tighten the link between innovation and mass production; on the other, improve intellectual property rights protection and allow for greater rewards to scientists. And, finally, China also needs to revamp its industrial policy, to make it fairer, more efficient, and more transparent. The purpose of industrial policy is to encourage innovation by overcoming market failures. Therefore, industrial policy should avoid "picking the winner." Instead, it should avoid restricting competition and should set a clear timeline for exit.

4. Shifting focuses of public finance from underpinning stability to supporting economic efficiency and distributive equity

The fiscal system needs to be transformed in several ways. First, the prioritization of government expenditure should shift from economic construction to social welfare. The mix of tax revenues should evolve as the revenue share of individual income tax increases but that of corporate income tax declines. New taxes, such as property tax, are urgently needed for distributive and local infrastructure purposes. Second, the government can try to ease current social security funding pressure by injecting state assets, extending retirement ages, and reducing excessive social security payments to retired government officials. The social security scheme should also provide more equal coverage for retired farmers. Third, the central government is trying to resolve excessive debt burdens of some local governments. In addition to placing restrictions on extra-budgetary revenues, the central government may also directly assist local governments in balancing their budgets and reducing debt burdens. And, finally, the central-local fiscal relationship should evolve from a highly centralized to a more decentralized system, with the local government reducing spending responsibilities but increasing direct revenues.

5. Supporting quality development through further financial reform, cautious financial innovation and prudent financial regulation

The financial system needs to adapt quickly in order to effectively support innovation. First, China needs more financial institutions and funding channels. Diversification of financial services could also better serve small- and medium-sized enterprises (SMEs) through increased competition and financial innovation, such as using machine learning and big-data analyses. Second, market mechanisms should play greater roles in allocating and pricing financial resources. Competitive neutrality should be helpful for improving funding conditions for SMEs, many of which are innovation startups. Market-based risk pricing, through interest rate liberalization, can also change financial institutions' ability and willingness to serve the new economy. And, finally, financial liberalization and innovation should be accompanied by restructuring of financial regulation, which has been largely ineffective in containing financial risks. Financial regulatory reforms should focus on policy effectiveness, through the ways that regulations are enforced.

6. Accelerating urbanization to unlock new economic impetuses by eliminating household registration and reforming land tenure

China can generate additional economic dynamism by raising the urbanization rate from 56% to 80% in the coming three decades, to offset slowing economic momentum dictated by the aging population. So far, most of the migrant workers leave their families in the villages, which has not only caused serious social problems but also weakened overall consumption demand. One, it is time for the government to completely stamp out the feudal household registration system, a reform that could have system-wide effects similar to the resumption of the university entrance examination or the adoption of household farming in an earlier era of reform. Allowing rural families into cities could help narrow the unfair rural-urban divide, increase consumption demand, and improve infrastructure efficiency. This time, the focus of the new urbanization program should be on large cities, instead of small towns. Moreover, urbanization should be accompanied by integration of the social security system across the country. Further land system reform, even the reform of land property rights, should be considered to provide farmers with the "first bucket of gold" when they move to cities.

7. Applying market-based policies, such as taxes, to build a green and low-carbon development path

The government has already launched a series of initiatives and programs in these areas, though with mixed results. If the ongoing efforts continue on the current track, it is possible for China to outperform its environmental and climate change targets. It is already the world's largest producer and supplier in renewable technologies, advancing ahead of schedule. It launched the environmental tax in 2018 and switched recently from feed-in-tariff to auction scheme in renewable energies, which shows great promise already. The main policy recommendation in the forthcoming study is to transition from an administrative-oriented to market-based approach in policy design and implementation. Here the 2018 policy to clean up the environment provides a useful example. The campaign-style implementation led to collapse of economic activities in some regions, followed by dramatic reversal of the policy. Such policies are too volatile and often unsustainable. Market-based approaches generally make the costs of environmental cleanup more transparent and sustainable.

8. Further opening unilaterally by giving up "developing country status" and contributing constructively to the international system

China's current international economic policymaking is heavily distracted by external disputes, but it should take a unilateral approach in establishing a high-quality opening regime. China can only expect to converge on the most advanced economies if it has an open economic system, and the standard for openness rises with the level of development. First, China should consider unilaterally giving up its "developing country status," which should enable China to reaffirm its reform commitment in the WTO framework and also to reduce tensions with economic partners. After all, it is in China's own interest to contribute to a rules-based economic order and to maintain a system of open trade and investment. Second, it is important to balance liberalization and stability. For instance, financial liberalization is now highly desirable, but volatile cross-border hot-money flows could be damaging. Therefore, some restrictions or prudential regulations could accompany financial liberalization. Again, the best strategy for tech development is through an open innovation system. But the security of the supply chain could be at risk at times, and some measures to ensure the security of the supply chain would be desirable. And, finally, China should try to actively participate in international economic governance — including the WTO and the IMF — through constructive, not disruptive, engagement. It's also reasonable for China to add some new innovations, such as BRI and AIIB, to the international system.

APPENDIX

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