

CHINA'S RISE AS ECONOMIC & STRATEGIC POWER¹

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INTRODUCTION

The spectacular rise of China is of global concern geo-strategically, impact on the International Political Economy and even on global power equation. The Chinese financial investments under the Belt and Route program have already started making nation states fall in debt traps. Chinese deployment of skilled manpower around the world has reached an alarming level. Hence it will be folly to underestimate China's political leadership and their ambitions to make China great again and reinstate the validity of the "Middle Kingdom" as the center piece of their strategic outlook with a view to replacing Russia and become the second superpower. Apart from economic, technological, infrastructural, and international outreach strategy to dominate the countries in South and Southeast Asia, Africa and the Middle East, AI is a central driver in the calculus of power for President Xi to achieve the world status of a superpower. China is well ahead to compete for if not the poor second position but certainly the third most advanced country in manned space programs, deep space related research, quantum communication, maritime technology, aviation industry and is simultaneously developing a "Think Tank" culture to develop the required soft power in international diplomacy but also employ the best of her manpower for

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Policy Perspectives Foundation (PPF) is a non-profit apolitical think tank. Its activities focus on complex and inter-connected challenges to internal peace, stability and development in India.

providing policy oriented documents and facilitate the Chinese leadership to formulate her strategic and global policies to achieve her ultimate aim as stated above. Today China has 1413 think tanks with US having 2203 think tanks and India with 612 think tanks at the third spot.

China has in the past two decades undoubtedly emerged as the “full spectrum peer competitor of the US in commercial and national security applications of AI”. China has developed the technology of the AI to maintain a complete surveillance of her citizens in a way that the political leadership can have full control to thwart any possible dissent. The use of such a technology can have enormous risks on human rights, freedom of speech and ultimately create a nation state to be led by political masters acquiring dictatorial powers of an unprecedented nature and convert the country from merely being a communist country to that of a closed totalitarian state. However, it will be useful at this stage to record that Cyber at this point of time is highly overrated in the arena of deterrence theory. It will be quite an achievement to find its place theoretically. As of today, whether the application of AI in cyber domain can possibly be crystal gazed about the umbilical relationship between deterrence and cyber capability.

The COVID-19 crisis which spread globally and has been attributed to China's irresponsible behaviour to kick start a global pandemic. The ruthless means adopted by China to contain the pandemic and ability to keep the death causality figures under a veil of secrecy and achieving a positive GDP growth rate as compared to the worldwide down plunge of the GDP can be seen as a remarkable achievement. Graham Allison ...writes:

“The implications of China's rise are still being absorbed in multiple domains, in trade, technology and geopolitics. But the most significant impact may be in how China's Communist Party-led government is changing global governance more in its own image

rather than the other way around. COVID-19 has helped reinforce this trend in the short term. After the initial disastrous cover-up of the outbreak of the virus in Wuhan, the Chinese party-state's unparalleled, and unchallenged, state capacity has driven infection rates down. With little debate, the government was able to lockdown hundreds of millions of people in their homes, seal internal and international borders, shut factories while commandeering the output of some businesses to supply medical equipment, mobilize the military, build hospitals and track the movements of citizens through mobile phone apps. Many governments have looked on with envy at this display of state capacity, even if a number of democracies have been successful in corralling rising infections without wielding authoritarian powers. The crisis has also been a reminder of China's dominance of supply chains for essential medical supplies, like protective masks and pharmaceutical ingredients, leaving even advanced democracies exposed. As a result, the kinds of political ideas which had struggled to find an audience in the U.S., including advanced industrial policy and the need to protect and nurture strategic sectors, are making a comeback, largely to compete against similar policies in China. But it's the intensifying tech war with the West, particularly the U.S., that has, paradoxically, really underscored Beijing's far-reaching influence."

China has also taken full advantage of her population dividend, her size, and her ability to collect data on every aspect by fair, unfair or in-ethical ways. This will pose a serious threat to modus operandi in the realm of digitised information and its impact on business and strategic affairs at global levels. It is almost clear that for China to achieve the status, her actions will indicate that it is ends which matter and not the means. This can be illustrated by the military actions that China

has been pursuing since 2019 Doklam incidence followed by the Galwan situation in Eastern Ladakh. By taking advantage of the LAC paradigm whose maintenance is based on interpretation by the local military commanders positioned onground, China has acted in the most inappropriate way. This will affect the geostrategic and geopolitical paradigm between the India and China as never before. The Indian political structure and leadership has undergone significant change in post 2014 period. Significant paradigm shift has taken place in India's strategic thinking which has resulted in the beginning of a new strategic culture to contain China in her military endeavours in the Sino Indian border stretching 3,488 Km across the Himalayan ranges from Ladakh to the Northeast². China is poised for

² Details of Indian Border with her neighbouring states will be useful to understand the pre independence baggage that India carries and continues to carry:



India has 15, 106.7 Km of land border and a coastline of 7,516.6 Km including island territories. The length of four land borders with neighboring countries is as follows: (a) Bangladesh: 4026.7 Km, (b) China: 3,488 Km; (c) Pakistan: 3323 Km, (d) Nepal: 1751 Km, (e) Myanmar: 1643 Km, (f) Bhutan: 699 Km; Afghanistan: 106 Km. Creation of Department of Border Management. In pursuance of Group of Ministers recommendations on Border Management, the Department of Border Management was created in the Ministry of Home Affairs in January 2004 to pay focused attention to the issues relating to management of international land and coastal borders, strengthening of border policing & guarding, creation of infrastructure like roads, fencing & floodlighting on the borders and implementation of Border Area Development Programme.

In the course of time, the D/o Border Management has also been given the responsibility of construction of 13 Integrated Check Posts (ICPs) along the international borders. The functions/ responsibilities of Border Management Department inter-alia include the following All matters relating to management of land borders (excluding LOC in J&K sector). All matters relating to coastal border including island territories of Andaman & Nicobar and Lakshadweep, etc. Matters relating to fencing and floodlighting of Indo- Bangladesh and Indo-Pak borders. Strengthening of border policing, surveillance and patrolling in all land and coastal borders. Creation of infrastructure including construction of motorable roads, provision of communication facilities, etc. in the border belt. Creation of infrastructure in coastal belt. Analysis of intelligence reports and sharing of actionable intelligence with concerned agencies relating to international borders. MHA's input in regard to demarcation of international borders. Composite strategy defining complementary roles of State Governments and of the Centre in border management. All matters relating to implementation of Border Area Development Programme. Development of Integrated Check Posts (ICPs) on the land borders of the country including setting up of Land Ports Authority of India (LPAI). Initiatives of Department of Border Management

As a part of the strategy to secure the borders as also to create infrastructure in the border areas of the country, several initiatives have been undertaken by the Department of Border Management. These include the

adventurism against India at a time when India presently is nowhere near the overall military capability of China or her technological and economic achievements in the last four decades.

China's military modernization program embarked during the last seven years has been unprecedented. It has overshot every known parameter. President Xi's ability to consolidate the entire command structure of the PLA and integrate them with the Naval and Airforce capabilities as well as the reorganization of the Seven Military Zones to Five Theatre Commands has made even India look like an insignificant competitor – this when India can boast of possessing the third largest Armed Forces in the world and a nuclear-powered state. China's involvement and expansionist ideas on disputed and undermarketed land borders with India, the speed of recolonize border villages on the LAC with India, create newer incursion in the Northeast even after the explosive situation created in Eastern Ladakh shows what amount of calculated risk China can take against India which in the past one year has made the military of China and India come to an Eyeball-to-Eyeball situation. China has made it clear (by non-resolving the issue of border) that she has arrived with enormous strategic as well as non-strategic assets which India will find hard to compete with her present military strength and military diplomatic endeavors. India's Defense Budget 2021- 22 is an empirical proof of the precarious position of India at strategic levels against China. India with her present military capability, negative GDP because of the COVED-19 and incapacity to find means to enhance her defense budget can

following:

Expeditious construction of fencing, floodlighting & roads along Indo-Bangladesh, Indo-Pakistan and Indo-Myanmar borders. Construction of strategic roads along India-China, Indo-Nepal & Indo-Bhutan borders. Deployment of hi-tech electronic surveillance equipment on international borders (through border guarding forces concerned). Construction of additional 509 Border Outposts (BOPs) for BSF (383 on Indo-Bangladesh border and 126 on Indo- Pakistan border) Implementation of the Coastal Security Schemes. Development of Integrated Check Posts (ICPs) at various locations on the International Borders of the country and setting up of the Land Ports Authority of India (LPAI) to administer/ manage the ICPs. In addition, various developmental works in the border areas have been undertaken by the Department under the **Border Area Development Programme**, which is being funded by M/o Finance as a part of the comprehensive approach to border management.

hardly match China or even engage China numerically or structurally at the military level. However, India has no other options but to engage China to safeguard her national interest, national integrity, and strategic autonomy. If China really believes that to regularize the international borders which for reasons of history has remained unresolved, can be by following what Brahma Chellani said famously as “what is ours (China’s) is ours while what is yours is negotiable”, also that “three steps forward in adversaries territory must be followed by the strategy of taking two steps backward to gain one step” and that “salami slicing is the way to expand the strategic territorial advantage” then India is left with no other options but to pre-empt each of these strategies with innovative strategic thinking.

This entails that soft power developed in Indian think tanks, the corporate sector and in Indian Universities must be utilised at conceptual levels and not rely on domain experts who have in the past seventy years have reduced critical thinking requirement to transactional behaviour, diplomacy into an art of appeasement. The Prime Minister has also stated³ about the Indian Bureaucracy as a hurdle to India’s development by making the private sector weigh down first under licence raj, then approval raj and now control the country by appropriating every decision-making position from national security, economic/fiscal areas, agriculture nuclear etc. etc.

To engage China on our own terms must be our first objective. This is to Ensure that each of their decision which is detrimental to India’s national security and national interest is countered in a way that it increases the cost of Chinese involvement in Indian affairs more costly. India must segregate the strategic military affairs and military diplomacy from the much larger mercantile interest of trade, commerce, infrastructural development, self sufficiency in consumer requirement. India must embark to “Securitise” the areas of communication,

³Sanya D. ‘Babu samjho ishare’ — Modi’s critique of IAS evokes shock but many also call for introspection <http://theprint.in/india/governance/babu-samjho-ishare-modis-critique-of-ias-evokes-shock-but-many-also-call-for-introspection/603341/>

health, education, defence production and even hospitality and tourism. Lastly, China's attempt to do "salami slicing" in our border areas must be countered by pre-emptive move to make China vulnerable along the 3,700 Km of international border with India. India understands very well that despite the massive deployment of the Chinese PLA - supported by their huge infrastructure credibility, and / or their superior economic power cannot look after every inch of the long border with India.

By making China negotiate military matters with military and segregating the political matters to negotiate with the Indian political leaders will make Chinese efforts to be divided. It is important that it must be understood that the politics of communication should be assisted by astute diplomacy to influence the world opinion against Chinese actions. If China is sensitive and worried about anything in the 21st Century, then it is the adverse world opinion towards any of their hopes and aspirations. In essence China, 'Has to be managed' as stated by the US President Biden and therefore the aspiration of the US as the regulatory power needs to be assisted by India in the sphere of interests of China. Essentially it will involve India's effort to tie down China in the Himalayan zone, collective security measures to securitise the Indian Ocean Region, the South China Sea, reduce the furtherance of Belt and Route and deny them access to Arabian Sea.

For the purposes of record, it does not take much effort to understand why the Chinese meeting their Indian counterparts to discuss the possible way to disengage during the latest 13th round of military talks failed.

Agreeing to the Chinese rationale that the first set of action to disengage will only be confined to the specific area and not cover the entire Eastern Ladakh does not leave India in a very advantageous position tactically or strategically.

However, this agreement may be able to lower the ambient temperature of

confrontation. This action or step indicates subtlety a political maturity on the part of India. The series of events confirms the opinion expressed by many global observers that China has time and again proved to be unreliable and a nation which cannot be trusted. However, the outcome of this posture taken by India will only be known with the passage of time. This may prove to be taking a calculated risk for of India unless careful vigilance is maintained. India has a task of making a road map to begin the process of engaging China effectively to safeguard her national interest and national security.

The present study has deliberated on “China’s Economic Rise” and “China As a Strategic Power”. It has been architected in a way for the forthcoming study to subsequently analyse the Sino Indian Strategic Parity as it exists presently, reduce the almost immoral difference in defence budget outlay between India and China to ensure that India can confront China in a way to increase the cost of escalation when attempted by China after the present move by China to a falsified move in Ladakh done presently in military negotiations at the latest 13th round of talk. China by making India believe that Sector wise de-escalation will pave the way for rest of Ladakh de-escalation. China has no intentions to do the same. China has merely brought time to reorganise, refurbish and recalibrate her tactical manoeuvres to augment her strategic moves to outsmart and completely the Indian defence credibility in Ladakh to ensure that her \$62 billion CPEC is safe to achieve a success to open a window to the Arabian Sea. India has just about six months to call the Chinese bluff by not allowing her guards down in Ladakh, create feasible alternative plans to ensure China understand that she will be prone to vulnerable points at more points along the Indo China border where the Chinese cannot reinforce or react to Indian military moves which may be able to upset the strategic balance in favour of India.

India in this scenario has had to allocate emergency budgetary provisions far

beyond what has been done officially in the financial outlay of 2021-22. India has lost enough territorial space and in post Galwan period functionally without any hopes to rectify the tactical or strategic anomaly which has led to an asymmetry of military balance and credibility which is beyond the visibility band. One of the radical measures that can be attempted if the political will is there to understand the desperate situation is to take the Pension Funds out of the Defence Budget and use the vast amount thus available as capital fund to finance the operational needs to contain China and avert the possible situation that may arise in Ladakh in the next six months.

Xi's statement of only a few days back to the PLA to be fully ready to confront the Indian Army is not a rhetoric but a clear indication of how the Chinese political thinking of consolidating strategically is integrated with the military power that they are willing to unleash in Ladakh region. China knows her immense difficulty to find a toehold of permanent nature in the Indian Ocean Region (IOR), the pressure to navigate unchallenged in the South China Sea (SCS) and unmanageable sea route for replenishment through the Malaccan Strait, unsustainable cooperation of Myanmar as a client state and the absolute necessity to find a safe and strategic corridor to the Arabian Sea.

China's Economic Rise

Prior to the initiation of economic reforms and trade liberalization nearly 40 years ago, China maintained policies that kept the economy very poor, stagnant, centrally controlled, vastly inefficient, and relatively isolated from the global economy. Since opening to foreign trade and investment and implementing free-market reforms in 1979, China has been among the world's fastest-growing economies, with real annual gross domestic product (GDP) growth averaging 9.5% through 2018, a pace described by the World Bank as "the fastest sustained expansion by a major economy in history." Such growth has enabled China, on average, to double its GDP every eight years and helped raise an estimated 800 million people out of poverty. China has become the world's largest economy (on

a purchasing power parity basis), manufacturer, merchandise trader, and holder of foreign exchange reserves. This in turn has made China a major commercial partner of the United States. China is the largest U.S. merchandise trading partner, biggest source of imports, and third-largest U.S. export market. China is also the largest foreign holder of U.S. Treasury securities, which help fund the federal debt and keep U.S. interest rates low.

As China's economy has matured, its real GDP growth has slowed significantly, from 14.2% in 2007 to 6.6% in 2018, and that growth is projected by the International Monetary Fund (IMF) to fall to 5.5% by 2024. The Chinese government has embraced slower economic growth, referring to it as the "new normal" and acknowledging the need for China to embrace a new growth model that relies less on fixed investment and exporting, and more on private consumption, services, and innovation to drive economic growth. Such reforms are needed for China to avoid hitting the "middle-income trap," when countries achieve a certain economic level but begin to experience sharply diminishing economic growth rates because they are unable to adopt new sources of economic growth, such as innovation.

The Chinese government has made innovation a top priority in its economic planning through several high-profile initiatives, such as "Made in China 2025," a plan announced in 2015 to upgrade and modernize China's manufacturing in 10 key sectors through extensive government assistance in order to make China a major global player in these sectors. However, such measures have increasingly raised concerns that China intends to use industrial policies to decrease the country's reliance on foreign technology (including by locking out foreign firms in China) and eventually dominate global markets.

In 2017, the Trump Administration launched a Section 301 investigation of China's innovation and intellectual property policies deemed harmful to U.S. economic interests. It subsequently raised tariffs by 25% on \$250 billion worth of

imports from China, while China increased tariffs (ranging from 5% to 25%) on \$110 billion worth of imports from the United States. Such measures have sharply decreased bilateral trade in 2019. On May 10, 2019, President Trump announced he was considering raising tariffs on nearly all remaining products from China. A protracted and escalating trade conflict between the United States and China could have negative consequences for the Chinese economy.

China's growing global economic influence and the economic and trade policies it maintains have significant implications for the United States and hence are of major interest to Congress. While China is a large and growing market for U.S. firms, its incomplete transition to a free-market economy has resulted in economic policies deemed harmful to U.S. economic interests, such as industrial policies and theft of U.S. intellectual property. This report provides background on China's economic rise; describes its current economic structure; identifies the challenges China faces to maintain economic growth; and discusses the challenges, opportunities, and implications of China's economic rise for the United States.

China's rise from a poor developing country to a major economic power in about four decades has been spectacular. From 1979 (when economic reforms began) to 2017, China's real gross domestic product (GDP) grew at an average annual rate of nearly 10%⁴. According to the World Bank, China has "experienced the fastest sustained expansion by a major economy in history—and has lifted more than 800 million people out of poverty⁵." China has emerged as a major global economic power. For example, it ranks first in terms of economic size on a purchasing power parity (PPP) basis, value-added manufacturing, merchandise trade, and holder of foreign exchange reserves.

⁴ China's economic reform process began in December 1978 when the Third Plenum of the Eleventh Central Committee of the Communist Party adopted Deng Xiaoping's economic proposals. Implementation of the reforms began in 1979.

⁵ World Bank, China Overview, March 28, 2017 available at <http://www.worldbank.org/en/country/china/overview>

China's rapid economic growth has led to a substantial increase in bilateral commercial ties with the United States. According to U.S. trade data, total trade between the two countries grew from \$5 billion in 1980 to \$660 billion in 2018. China is currently the United States' largest merchandise trading partner, its third-largest export market, and its largest source of imports. Many U.S. companies have extensive operations in China to sell their products in the booming Chinese market and to take advantage of lower-cost labour for export-oriented manufacturing⁶. These operations have helped some U.S. firms to remain internationally competitive and have supplied U.S. consumers with a variety of low-cost goods. China's large-scale purchases of U.S. Treasury securities (which totalled \$1.1 trillion as of April 2019) have enabled the federal government to fund its budget deficits, which help keep U.S. interest rates relatively low⁷.

However, the emergence of China as a major economic power has raised concern among many U.S. policymakers. Some claim that China uses unfair trade practices (such as an undervalued currency and subsidies given to domestic producers) to flood U.S. markets with low-cost goods, and that such practices threaten American jobs, wages, and living standards. Others contend that China's growing use of industrial policies to promote and protect certain domestic Chinese industries or firms favoured by the government, and its failure to take effective action against widespread infringement and theft of U.S. intellectual property rights (IPR) in China, threaten to undermine the competitiveness of U.S. IP-intensive industries. In addition, while China has become a large and growing market for U.S. exports, critics contend that numerous trade and investment

⁶ Some companies use China as part of their global supply chain for manufactured parts, which are then exported and assembled elsewhere. Other firms have shifted the production of finished products from other countries (mainly in Asia) to China; they import parts and materials into China for final assembly.

⁷ See CRS Report RL33536, [China-U.S. Trade Issues](#), by Wayne M. Morrison.

barriers limit opportunities for U.S. firms to sell in China or force them to set up production facilities in China as the price of doing business there.

The Chinese government views a growing economy as vital to maintaining social stability. However, China faces several major economic challenges that could dampen future growth, including distortive economic policies that have resulted in overreliance on fixed investment and exports for economic growth (rather than on consumer demand), government support for state-owned firms, a weak banking system, widening income gaps, growing pollution, and the relative lack of the rule of law in China. The Chinese government has acknowledged these problems and has pledged to address them by implementing policies to increase the role of the market in the economy, boost innovation, make consumer spending the driving force of the economy, expand social safety net coverage, encourage the development of less-polluting industries (such as services), and crack down on official government corruption. The ability of the Chinese government to implement such reforms will likely determine whether China can continue to maintain relatively rapid economic growth rates or will instead begin to experience significantly lower growth rates.

China's growing economic power has led it to become increasingly involved in global economic policies and projects, especially infrastructure development. China's Belt and Road initiative (BRI) represents a grand strategy by China to finance infrastructure throughout Asia, Europe, Africa, and beyond. If successful, China's economic initiatives could significantly expand export and investment markets for China and increase its "soft power" globally.

This report provides background on China's economic rise; describes its current economic structure; identifies the challenges China faces to maintain economic growth; and discusses the challenges, opportunities, and implications of China's economic rise for the United States.

China's Economy Prior to Reforms

Prior to 1979, China, under the leadership of Chairman Mao Zedong, maintained a centrally planned, or command, economy. A large share of the country's economic output was directed and controlled by the state, which set production goals, controlled prices, and allocated resources throughout most of the economy. During the 1950s, all of China's individual household farms were collectivized into large communes. To support rapid industrialization, the central government undertook large-scale investments in physical and human capital during the 1960s and 1970s. As a result, by 1978 nearly three-fourths of industrial production was produced by centrally controlled, state-owned enterprises (SOEs), according to centrally planned output targets. Private enterprises and foreign-invested firms were generally barred. A central goal of the Chinese government was to make China's economy relatively self-sufficient. Foreign trade was generally limited to obtaining those goods that could not be made or obtained in China. Such policies created distortions in the economy. Since most aspects of the economy were managed and run by the central government, there were no market mechanisms to efficiently allocate resources, and thus there were few incentives for firms, workers, and farmers to become more productive or be concerned with the quality of what they produced (since they were mainly focused on production goals set by the government).

According to Chinese government statistics, China's real GDP grew at an average annual rate of 6.7% from 1953 to 1978, although the accuracy of these data has been questioned by many analysts, some of whom contend that during this period, Chinese government officials (especially at the subnational levels) often exaggerated production levels for a variety of political reasons. Economist Angus Maddison puts China's actual average annual real GDP growth during this

period at about 4.4%⁸. In addition, China's economy suffered significant economic downturns during the leadership of Chairman Mao Zedong, including during the Great Leap Forward from 1958 to 1962 (which led to a massive famine and reportedly the deaths of up to 45 million people⁹) and the Cultural Revolution from 1966 to 1976 (which caused widespread political chaos and greatly disrupted the economy). From 1950 to 1978, China's per capita GDP on a purchasing power parity (PPP) basis¹⁰, a common measurement of a country's living standards, doubled. However, from 1958 to 1962, Chinese living standards fell by 20.3%, and from 1966 to 1968, they dropped by 9.6%. In addition, the growth in Chinese living standards paled in comparison to those in the West, such as Japan, as indicated in.

In 1978, (shortly after the death of Chairman Mao in 1976), the Chinese government decided to break with its Soviet-style economic policies by gradually reforming the economy according to free market principles and opening trade and investment with the West, in the hope that this would significantly increase economic growth and raise living standards. As Chinese leader Deng Xiaoping, the architect of China's economic reforms, put it: "Black cat, white cat, what does it matter what color the cat is as long as it catches mice¹¹?"

Economic Reforms

Beginning in 1979, China launched several economic reforms. The central government- initiated price and ownership incentives for farmers, which enabled them to sell a portion of their crops on the free market. In addition, the

⁸ The Organization for Economic Cooperation and Development, Chinese Economic Performance in the Long Run, 1960-2030, by Angus Maddison, 2007

⁹ New York Times, Mao's Great Leap to Famine, December 15, 2010.

¹⁰ Purchasing power parities are a method used to measure and compare the economic data of other countries expressed in U.S. dollars. That method adjusts the data to reflect differences in prices across countries

¹¹ This reference appears to have meant that it did not matter whether an economic policy was considered to be "capitalist" or "socialist," what really mattered was whether that policy would boost the economy and living standards.

government established four special economic zones along the coast for the purpose of attracting foreign investment, boosting exports, and importing high technology products into China. Additional reforms, which followed in stages, sought to decentralize economic policymaking in several sectors, especially trade. Economic control of various enterprises was given to provincial and local governments, which were generally allowed to operate and compete on free market principles, rather than under the direction and guidance of state planning. In addition, citizens were encouraged to start their own businesses. Additional coastal regions and cities were designated as open cities and development zones, which allowed them to experiment with free-market reforms and to offer tax and trade incentives to attract foreign investment. In addition, state price controls on a wide range of products were gradually eliminated. Trade liberalization was also a major key to China's economic success. Removing trade barriers encouraged greater competition and attracted FDI inflows. China's gradual implementation of economic reforms sought to identify which policies produced favourable economic outcomes (and which did not) so that they could be implemented in other parts of the country, a process Deng Xiaoping reportedly referred to as "crossing the river by touching the stones"¹².

China's Economic Growth and Reforms: 1979-the Present

Since the introduction of economic reforms, China's economy has grown substantially faster than during the pre-reform period, and, for the most part, has avoided major economic disruptions¹³. From 1979 to 2018, China's annual

¹² Many analysts contend that Deng's push to implement economic reforms was largely motivated by a belief that they would boost economic growth and thus strengthen the power of the Chinese Communist Party.

¹³ China's economic growth slowed significantly following the aftermath of the Tiananmen massacre that occurred in June 1989. Several countries, including the United States, imposed trade sanctions against China, and Chinese economic reforms were essentially put on hold. China's real GDP growth rate fell from 11.3% in 1988 to 4.2% in 1989 and declined to 3.9% in 1990. In 1991, economic reforms were restarted and foreign sanctions against China were reduced or removed, and real GDP grew by 9.2%.

real GDP averaged 9.5%. This has meant that on average China has been able to double the size of its economy in real terms every eight years. The global economic slowdown, which began in 2008, had a significant impact on the Chinese economy. China's media reported in early 2009 that 20 million migrant workers had returned home after losing their jobs because of the financial crisis and that real GDP growth in the fourth quarter of 2008 had fallen to 6.8% year-on-year. The Chinese government responded by implementing a \$586 billion economic stimulus package, aimed largely at funding infrastructure and loosening monetary policies to increase bank lending¹⁴. Such policies enabled China to counter the effects of the sharp global fall in demand for Chinese products. From 2008 to 2010, China's real GDP growth averaged 9.7%. However, the rate of GDP growth declined slowly for the next six consecutive years, falling from 10.6% in 2010 to 6.7% in 2016. Real GDP ticked up to 6.8% in 2017, but slowed to 6.6% in 2018, (although it rose to 6.8% in 2017). The IMF's April 2019 World Economic Outlook projects that China's real GDP growth will slow each year over the next six years, falling to 5.5% in 2024¹⁵.

Many economists warn that China's economic growth could slow further if the United States and China continue to impose punitive economic measures against each other, such as the tariff hikes that have resulted from U.S. action under Section 301 and Chinese retaliation. The Organization for Economic and Cooperation and Development (OECD) projects that increased tariffs on all trade between the United States and China could reduce China's real GDP in 2021-2022 by 1.1% relative to the OECD's baseline economic projections¹⁶.

¹⁴ Xinhua net, "20 million jobless migrant workers return home," February 2, 2009.

¹⁵ IMF, World Economic Outlook Database, April 2019.

¹⁶ OECD, Economic Outlook, May 2019, available at https://www.oecd-ilibrary.org/docserver/b2e897b0-en.pdf?expires=1561458758&id=id&accname=oid011901&checksum=40A52BB1E685ADAB80433EDD227A_4D65

Causes of China's Economic Growth

Economists generally attribute much of China's rapid economic growth to two main factors: large-scale capital investment (financed by large domestic savings and foreign investment) and rapid productivity growth. These two factors appear to have gone together hand in hand. Economic reforms led to higher efficiency in the economy, which boosted output and increased resources for additional investment in the economy.

China has historically maintained a high rate of savings. When reforms were initiated in 1979, domestic savings as a percentage of GDP stood at 32%. However, most Chinese savings during this period were generated by the profits of SOEs, which were used by the central government for domestic investment. Economic reforms, which included the decentralization of economic production, led to substantial growth in Chinese household savings as well as corporate savings. As a result, China's gross savings as a percentage of GDP is the highest among major economies. The large level of domestic savings has enabled China to support a high level of investment. In fact, China's gross domestic savings levels far exceed its domestic investment levels, which have made China a large net global lender.

Several economists have concluded that productivity gains (i.e., increases in efficiency) have been another major factor in China's rapid economic growth. The improvements to productivity were caused largely by a reallocation of resources to more productive uses, especially in sectors that were formerly heavily controlled by the central government, such as agriculture, trade, and services. For example, agricultural reforms boosted production, freeing workers to pursue employment in the more productive manufacturing sector. China's decentralization of the economy led to the rise of non-state enterprises (such as private firms), which tended to pursue more productive activities than the centrally controlled SOEs and were more market-oriented and more efficient. Additionally,

a greater share of the economy (mainly the export sector) was exposed to competitive forces. Local and provincial governments were allowed to establish and operate various enterprises without interference from the government. In addition, FDI in China brought with it new technology and processes that boosted efficiency.

However, as China's technological development begins to converge with major developed countries (i.e., through its adoption of foreign technology), its level of productivity gains, and thus, real GDP growth, could slow significantly from its historic levels unless China becomes a major centre for new technology and innovation and/or implements new comprehensive economic reforms. Several developing economies (notably several in Asia and Latin America) experienced rapid economic development and growth during the 1960s and 1970s by implementing some of the same policies that China has utilized to date to develop its economy, such as measures to boost exports and to promote and protect certain industries. However, at some point in their development, some of these countries began to experience economic stagnation (or much slower growth compared to previous levels) over a sustained time, a phenomenon described by economists as the "middle-income trap"¹⁷. This means that several developing (low-income) economies were able to transition to a middle-income economy, but because they were unable to sustain high levels of productivity gains (in part, because they could not address structural inefficiencies in the economy), they were unable to transition to a high-income economy¹⁸.

China may be at a similar crossroads now. The World Bank classifies development levels of economies using a per capita gross national income

¹⁷ Japan was able to become a high-income economy, but since the mid-1980s, its economic growth has been relatively stagnant.

¹⁸ These designations are based on World Bank per capita GDP measurements.

(GNI) methodology¹⁹. According to the World Bank, China went from a low-income economy to a low-middle-income economy in 1997, and in 2010, it became an upper-middle-income country. China's 2017 per capita GNI (at \$8,690) was 38.7% below the level China would need to obtain to become a high-income economy. The Chinese government projects that China can cross the high-income threshold by 2025. It hopes to achieve this largely by making innovation a major source of future economic growth. Sceptics contend that innovation growth in China will be hard to achieve, especially if it is mainly state-driven and imposes new restrictions on foreign firms,

The Economist Intelligence Unit (EIU) projects that China's real GDP growth will slow considerably over the next several decades, eventually converging on U.S. growth rates by the year 2037 (U.S. and Chinese real GDP growth rates are both projected at 1.9%). For some years thereafter, EIU projects U.S. GDP growth to be greater than China's²⁰ The Chinese government has indicated its desire to move away from its current economic model of fast growth at any cost to more "smart" economic growth, which seeks to reduce reliance on energy-intensive and high-polluting industries and rely more on high technology, green energy, and services. China also has indicated it wants to obtain more balanced economic growth.

Measuring the Size of China's Economy

The rapid growth of the Chinese economy has led many analysts to speculate when China will overtake the United States as the "world's largest economic power." The "actual" size of China's economy has been a subject of extensive debate among economists. Measured in U.S. dollars using nominal exchange rates, China's GDP in 2018 in nominal U.S. dollars was \$13.4 trillion, which

¹⁹ The classifications are determined by per capita income ranges (the thresholds of which are adjusted annually). These include low-income economies, lower-middle-income economies, upper-middle-income countries, and high-income countries.

²⁰ Long-term economic projections should be interpreted with caution.

was 65.3% of the size of the U.S. economy, according to estimates made by the IMF. China's 2018 per capita GDP in nominal dollars was \$9,608, which was 15.3% of the U.S. per capita level.

Many economists contend that using nominal exchange rates to convert Chinese data (or those of other countries) into U.S. dollars fails to reflect the true size of China's economy and living standards relative to the United States. Nominal exchange rates simply reflect the prices of foreign currencies vis-à-vis the U.S. dollar, and such measurements exclude differences in the prices for goods and services across countries. To illustrate, one U.S. dollar exchanged for local currency in China would buy more goods and services there than it would in the United States. This is because prices for goods and services in China are generally lower than they are in the United States. Conversely, prices for goods and services in Japan are generally higher than they are in the United States (and China). Thus, one dollar exchanged for local Japanese currency would buy fewer goods and services there than it would in the United States. Economists attempt to develop estimates of exchange rates based on their actual purchasing power relative to the dollar to make more accurate comparisons of economic data across countries, usually referred to as purchasing power parity (PPP).

The PPP exchange rate increases the (estimated) measurement of China's economy and its per capita GDP. According to the IMF (which uses price surveys conducted by the World Bank), prices for goods and services in China are about half the level they are in the United States. Adjusting for this price differential raises the value of China's 2018 GDP from \$13.4 trillion (nominal dollars) to \$25.3 trillion (on a PPP basis²¹ IMF data indicate that China overtook the United States as the world's largest economy in 2014 on a PPP basis²²).

²¹ PPP data reflect what the value of China's goods and services would be if they were sold in the United States.

²² The United States remains the world's largest economy when using nominal U.S. dollars.

China's share of global GDP on a PPP basis rose from 2.3% in 1980 to an estimated 18.3% in 2017, while the U.S. share of global GDP on a PPP basis fell from 24.3% to an estimated 15.3%²³. This would not be the first time in history that China was the world's largest economy (see text box below). China's economic ascendancy as the world largest economy has been impressive, especially considering that in 1980, China's GDP on a PPP basis was only one-tenth that of the United States. The IMF predicts that by 2024, China's economy will be 56% larger than the U.S. economy on a PPP basis.

Table below Compares Chinese, and U.S. GDP and Per Capita GDP in Nominal U.S. Dollars and a Purchasing Power Parity Basis: 2018

	China	United States
Nominal GDP (\$ billions)	13,407	20,494
GDP in PPP (\$ billions)	25,270	20,494
Nominal Per Capita GDP (\$)	9,608	62,606
Per Capita GDP in PPP (\$)	18,110	62,606

Source: IMF, World Economic Forum.

²³ IMF, World Economic Outlook, October 2017, projections

The Decline and Rise of China's Economy

According to a study by economist Angus Maddison, China was the world's largest economy in 1820, accounting for an estimated 32.9% of global GDP. However, foreign, and civil wars, internal strife, weak and ineffective governments, natural disasters (some of which were man-made), and distortive economic policies caused China's share of global GDP on a PPP basis to shrink significantly. By 1952, China's share of global GDP had fallen to 5.2%, and by 1978, it slid to 4.9%. The adoption of economic reforms by China in the late 1970s led to a surge in China's economic growth and helped restore China as a major global economic power.

Source: The Organization for Economic Cooperation and Development, Chinese Economic Performance in the Long Run, 960-2030, by Angus Maddison, 2007.

Figure 7. U.S. and Chinese GDP (PPP Basis) as a Share of Global Total: 1980-2018 (%)

Source: IMF, World Economic Outlook, April 2019.

The PPP measurement also raises China's 2018 nominal per capita GDP (from \$9,608) to \$18,110, which was 28.9% of the U.S. level. Even with continued rapid economic growth, it would likely take many years for Chinese living standards to approach U.S. levels.

China as the World's Largest Manufacturer

China has emerged as the world's largest manufacturer according to the World Bank. It estimated that in 2016, the value of China's manufacturing on a gross value-added basis was 49.2% higher than the U.S. level. Manufacturing plays a considerably more important role in the Chinese economy than it does for the United States. In 2016, China's gross valued added manufacturing was equal to 28.7% of its GDP, compared to 11.6% for the United States²⁴.

In its 2016 Global Manufacturing Competitiveness Index, Deloitte (an international consulting firm) ranked China as the world's most competitive manufacturer (out of 40 countries), based on a survey of global manufacturing executives, while the United States ranked second (it ranked fourth in 2010). The

²⁴ The World Bank, Data, at <https://data.worldbank.org/indicator/NV.IND.MANF.CD>.

index found that global executives predicted that the United States would overtake China by 2020 to become the world's most competitive economy, largely because of its heavy investment in talent and technology (e.g., high levels of R&D spending and activities, the presence of top-notch universities, and large amounts of venture capital being invested in advanced technologies). On the other hand, while China was expected to remain a major manufacturing power because of its large R&D spending levels, movement toward higher-valued, advanced manufacturing, government policies to promote innovation, and a large pool of graduates in science, technology, engineering and mathematics, it was viewed as facing several challenges, including a slowing economy, a decline in value-added manufacturing and overcapacity in several industries, rising labour costs, and a rapidly aging population. As a result, China was projected to fall to the second-most competitive manufacturer by 2020²⁵.

More broadly, the World Economic Forum (WEF) produces an annual report that assesses and ranks (based on an index) the global competitiveness of a country's entire economy, based on factors that determine the level of productivity of an economy, which in turn sets the level of prosperity that the country can achieve. The WEF's 2018 Global Competitive Index ranked China as the world's 28th-most competitive economy (out of 140 economies), while the United States ranked first²⁶.

Changes in Wage and Labour Cost Advantages

The decline in China's working age population may have contributed rising wages in China. China's average monthly wages (converted into U.S. dollars) in 1990 were \$55, compared with \$32 for Vietnam and \$221 for Mexico²⁷.

²⁵ Deloitte, 2016 Global Manufacturing Competitiveness Index, 2016, available at <https://www2.deloitte.com/content/dam/Deloitte/us/Documents/manufacturing/us-gmci.pdf>

²⁶ World Economic Forum, The Global Competitiveness Report, 2016–2017, September 2016.

²⁷ The Economist Intelligence Unit, Data Tool, accessed in June 2019.

However, in 2018, China's average monthly wages (at \$990) were 316% higher than Vietnam's wages (\$238) and 158.5% higher than Mexico's (\$383). From 2007 to 2018, China's average monthly wages rose by 263%. The American Chamber of Commerce in China (AmCham China) 2019 Business Climate survey listed rising labour costs as the second-biggest challenge facing U.S. firms in China (56% of recipients cited them as their largest concern)²⁸. In 2000, China's unit labour production costs were 42.3 of U.S. levels and by 2018 they rose to 75.5% of U.S. levels²⁹.

Foreign Direct Investment (FDI) in China

China's trade and investment reforms and incentives led to a surge in FDI beginning in the early 1990s. Such flows have been a major source of China's productivity gains and rapid economic and trade growth. There were reportedly 445,244 foreign-invested enterprises (FIEs) registered in China in 2010, employing 55.2 million workers or 15.9% of the urban workforce³⁰. As indicated in Figure 11, FIEs account for a significant share of China's industrial output. That level rose from 2.3% in 1990 to a high of 35.9% in 2003 but fell to 25.9% in 2011³¹. In addition, FIEs are responsible for a significant level of China's foreign trade. At their peak, FIEs accounted for 58.3% of Chinese exports in 2005 and 59.7% of imports, but these levels have subsequently fallen, reaching 41.7% and 43.7%, respectively, in 2018.

The United Nations Conference on Trade and Development (UNCTAD) reports that China has become both a major recipient of global FDI as well as a major provider of FDI outflows (see Figure 13)³². China's FDI inflows in 2018

²⁸ AmCham China, 2018 Business Climate Survey Report, January 2017, available at <http://www.amchamchina.org/>

²⁹ The Economist Intelligence Unit, Data Tool, accessed in June 2019.

³⁰ China 2012 Statistical Yearbook

³¹ Industrial output is defined by the Chinese government as the total volume of final industrial products produced and industrial services provided during a given period. Source: China 2012 Statistical Yearbook

³² U.N. FDI data differ from Chinese data, in part because Chinese data are limited to nonfinancial FDI and UN data includes financial-related FDI. UNCTAD reports Hong Kong FDI data separately.

were \$139 billion, making it the world's second-largest recipient of FDI after the United States³³. China's FDI outflows grew rapidly after 2005 and exceeded FDI inflows for the first time in 2015. China's FDI outflows reached a historic peak of \$196.1 billion in 2016, but declined in 2017 and 2018, reflecting a crackdown by the Chinese government on investment deemed wasteful and well as greater scrutiny by foreign governments of China's efforts to obtain advanced technology firms and other strategic assets. Still, China was the world's second-largest source of FDI outflows (after Japan).

The sharp increase in China's global FDI outflows in recent years appears to be largely driven by several factors, including Chinese government policies and initiatives to encourage firms to "go global." The government wants to use FDI to gain access to IPR, technology, know-how, famous brands, etc., in order to move Chinese firms up the value-added chain in manufacturing and services, boost domestic innovation and development of Chinese brands, and help Chinese firms (especially SOEs) to become major global competitors³⁴. China's slowing economy and rising labour costs have also encouraged greater Chinese overseas FDI in order to help firms diversify risk and expand business opportunities beyond the China market, and, in some cases, to relocate less competitive firms from China to low-cost countries. China's Ministry of Foreign Trade (MOFCOM) reports that in 2018, Chinese nonfinancial FDI in BRI countries totalled \$15.6 billion, up 8.9% over the previous year³⁵. Additionally, increased FDI outflows may be the result of the Chinese government attempting to diversify its foreign exchange reserve holdings (which totalled \$3.1 trillion as of April 2019—by far

³³ UNCTAD, 2019 World Investment Report, available at https://unctad.org/en/PublicationsLibrary/wir2019_en.pdf

³⁴ The composition of Chinese FDI sectors has changed over the past few years. For example, according to AEI/Heritage Foundation, in 2010, 67% of Chinese FDI outflows were in energy and metals sectors, but by 2015, this level dropped to 29%, caused in part by large levels of Chinese FDI in transportation, finance, realstate, and technology sectors.

³⁵ Xinhuanet, "China's ODI sees stable development in 2018," January 16, 2019, available at http://www.xinhuanet.com/english/2019-01/16/c_137749000.htm

the world's largest holder). The largest foreign investors in China (based on FDI stock through 2017) were Hong Kong (52.6% of total)³⁶, the British Virgin Islands (10.6%), Japan (6.1%), Singapore (4.0%), and Germany (3.2%) (see Table 2).

Table 2. Chinese Data on Top Ten Sources of China's FDI Inflows to China: 1979-2017 (\$ billions and percentage of total)

Country	Estimated Cumulative Utilized FDI: 1979-2017	
	Amount	% of Total
Total	2,688	100
Hong Kong	1,241	46.2
British Virgin Islands	286	10.6
Japan	165	6.1
Singapore	108	4.0
Germany	87	3.2
S. Korea	73	2.7
U.S.	72	2.7
Cayman Islands	49	1.8
The Netherlands	37	1.4
Taiwan	33	1.2

Source: IMF Coordinated Direct Investment Survey.

Factors Driving China's FDI Outflow Strategy

A key aspect of China's economic modernization and growth strategy during the 1980s and 1990s was to attract FDI into China to help boost the development of domestic firms. Investment by Chinese firms abroad was

³⁶ Much of the FDI originating from Hong Kong may originate from other foreign investors, such as Taiwan. In addition, some Chinese investors might be using these locations to shift funds overseas in order to re-invest in China to take advantage of preferential investment policies (this practice is often referred to as "round-tipping"). Thus, the actual level of FDI in China may be overstated.

sharply restricted. However, in 2000, China's leaders initiated a new "go global" strategy, which sought to encourage Chinese firms (primarily SOEs) to invest overseas. One key factor driving this investment is China's massive accumulation of foreign exchange reserves. Traditionally, a significant level of those reserves has been invested in relatively safe but low-yielding assets, such as U.S. Treasury securities. On September 29, 2007, the Chinese government officially launched the China Investment Corporation (CIC) in an effort to seek more profitable returns on its foreign exchange reserves and diversify away from its U.S. dollar holdings³⁷. The CIC was originally funded at \$200 billion, making it one of the world's largest sovereign wealth funds³⁸. Another factor behind the government's drive to encourage more outward FDI flows has been to obtain natural resources, such as oil and minerals, deemed by the government as necessary to sustain China's rapid economic growth³⁹. Finally, the Chinese government has indicated its goal of developing globally competitive Chinese firms with their own brands. Investing in foreign firms, or acquiring them, is viewed as a method for Chinese firms to obtain technology, management skills, and often, internationally recognized brands, needed to help Chinese firms become more globally competitive. For example, in April 2005, Lenovo Group Limited, a Chinese computer company, purchased IBM Corporation's personal computer division for \$1.75 billion⁴⁰. The largest destinations of cumulative Chinese FDI outflows through 2017 were Hong Kong (54.2% of total), the Cayman Islands (13.9%), the British Virgin Islands (6.7%), and the United States (3.7%) (see Table 3).

Table 3. Major Destinations of Chinese Nonfinancial FDI Outflows by Stock through 2017 (\$ billions and percent of total)

³⁷ See CRS Report RL34337, [China's Sovereign Wealth Fund](#), by Michael F. Martin

³⁸ At the end of 2015, CIC's assets totalled \$810 billion.

³⁹ Chinese oil and mineral companies are dominated by SOEs

⁴⁰ The Chinese government is believed to be Lenovo's largest shareholder

Source: China National Bureau of Statistics.

Note: Ranked according to the top seven destinations of the stock of Chinese FDI outflow through 2017

A significant level of Chinese FDI that goes to Hong Kong, the British Virgin Islands, and the Cayman Islands likely is redirected elsewhere. The American

Destination	Stock of FDI through 2017	Share of FDI Stock through 2017 (%)
Total	1,809	—
Hong Kong	981	54 .2
Cayman Islands	251	13 .9
British Virgin Islands	122	6 .7
United States	67	3 .7
Singapore	45	2 .5
Australia	36	2 .0
United Kingdom	20	1 .1

Enterprise Institute (AEI) maintain the China Global Investment Tracker (CGIT), a database that has been developed to track the actual flows (from the parent company to the final destination) of Chinese investment globally. The CGIT database tracks FDI valued at \$100 million or more (which it refers to as "China's outward non-bond investment")⁴¹. These data differ significantly from official Chinese FDI outflow data. The CGIT data on the top destinations of total Chinese outward non-bond outward investment from 2005 to 2017 included the United States (\$172.7 billion), Australia (\$103.7 billion), the United Kingdom (\$75

⁴¹ AEI/Heritage Foundation's methodology do not use the standard measurement of FDI, which generally includes foreign ownership or control of at least 10% share or control of an entity

billion), Brazil (\$61.2 billion), and Russia (\$53.8)⁴².

Major Long-Term Challenges Facing the Chinese Economy

China is currently undergoing a major restructuring of its economic model. Policies that were employed in the past to essentially produce rapid economic growth at any cost were very successful. However, such policies have entailed several other costs (such as heavy pollution, widening income inequality, overcapacity in many industries, an inefficient financial system, rising corporate debt, and numerous imbalances in the economy) and therefore the old growth model is viewed by many economists as no longer sustainable. China has sought to develop a new growth model ("the new normal") that promotes more sustainable (and less costly) economic growth that puts greater emphasis on private consumption and innovation as the new drivers of the Chinese economy. Implementing a new growth model that sustains healthy economic growth could prove challenging unless China is able to effectively implement new economic reforms. Many analysts warn that without such reforms, China could face a period of stagnant economic growth and living standards, a condition referred to by economists as the "middle-income trap" (Several of these challenges are discussed below.

Despite China's three-decade history of widespread economic reforms, Chinese officials contend that China is a "socialist-market economy." This appears to indicate that the government accepts and allows the use of free market forces in a few areas to help grow the economy, but the government still plays a major role in the country's economic development.

China's economic growth model has emphasized the growth of heavy industry in China, much of which is energy-intensive and high polluting. The level

⁴² The CGIT also estimates the flow of Chinese FDI to the United States in 2017 at \$24.5 billion (compared to \$54.6 billion in 2016), making the United States the largest destination of Chinese outward FDI. China's largest U.S. acquisition in 2017 was HNA's purchase of CIT Group's aircraft leasing business for \$10.4 billion.

of pollution in China continues to worsen, posing serious health risks to the population. The Chinese government often disregards its own environmental laws to promote rapid economic growth. China's environmental challenges are illustrated by the following incidents and reports.

- A 2018 report by ExxonMobil estimated that China contributed about 60% of the growth in global CO₂ emissions from 2000 to 2016, and that its emissions would surpass the combined CO₂ levels of the United States and EU by 2025⁴³.
- A 2017 OECD report estimated the health costs of China's air pollution in 2015 at \$1.4 trillion, equivalent to 7.8% of its GDP⁴⁴.
- A 2015 study by the Rand Corporation estimated that the costs (in terms of health impact and lost productivity) from China's air pollution were equal to 6.5% of GDP each year from 2000 to 2010. It further estimated the costs as a percentage of GDP of water pollution and soil degradation at an additional 2.1% and 1.1%, respectively⁴⁵.
- On August 12, 2015, a series of large explosions in several warehouses containing chemicals occurred in the Chinese port city of Tianjin, claiming the lives of at least 163 people. Some press reports have blamed poor government enforcement of environmental regulations for the disaster. For example, some in China have questioned why dangerous chemicals were warehoused so close to residential areas and have raised concerns over the extent of chemical contamination in the area that may have resulted from the explosions.

⁴³ ExxonMobil, 2018 Outlook for Energy, A View to 2040, 2018, p. 60, available at <http://cdn.exxonmobil.com/~media/global/files/outlook-for-energy/2018/2018-outlook-for-energy.pdf>

⁴⁴ OECD, The Rising Cost of Ambient Air Pollution thus far in the 21st Century, Results from the BRIICS and the OECD Countries, July 2017, p. 22, available at <http://www.oecd-ilibrary.org/docserver/download/d1b2b844-en.pdf?expires=1517681542&id=id&accname=guest&checksum=9B43144FCF78931DCE50EBEC9B8F84E8>

⁴⁵ The Rand Corporation, Cost of Selected Policies to Address Air Pollution in China, 2015, p. 3, available at http://www.rand.org/content/dam/rand/pubs/research_reports/RR800/RR861/RAND_RR861.pdf

- The U.S. Embassy in Beijing, which monitors and reports air quality in China based on an air quality index of particulate matter (developed by the U.S. Environmental Protection Agency) considered to pose a health concern, reported that the air quality in Beijing for a majority of the days in January 2013 ranged from "unhealthy" to "hazardous" (based on 24-hour exposure) and, on a few days, it recorded high readings that were "beyond index"⁴⁶. The level of poor air quality in Beijing was termed by some in China as "Airpocalypse," and reportedly forced the government to shut down some factories and reduce the level of official cars on the road⁴⁷. On December 9, 2013, China's media reported that half of China was blanketed by smog⁴⁸. The U.S. Consulate General in Shanghai reported that there were several days in December 2013 where its measurement of the air quality in Shanghai was hazardous or very unhealthy, and during some time periods on December 5, 2013, its readings were "beyond index." According to the U.S. Embassy in Beijing, from 2008 to 2015, nearly two-thirds of the days in Beijing had air pollution considered to be unhealthy⁴⁹.

- In February 2013, China's Geological Survey reportedly estimated that 90% of all Chinese cities had polluted groundwater, with two-thirds having "severely polluted" water⁵⁰.

- According to a 2012 report by the Asian Development Bank, less than 1% of the 500 largest cities in China meet the air quality standards recommended by the World Health Organization, and 7 of these are ranked among the 10 most polluted cities in the world⁵¹.

⁴⁶ Hazardous is the worst category for air quality used by the U.S. embassy, based on a numerical value of its index ranging from 301 to 500. A measurement of below 50 is considered good. On several occasions, the air quality index in Beijing has surpassed 500, and on January 12, 2013, it reportedly hit 755

⁴⁷ National Public Radio, "Beijing's 'Airpocalypse' Spurs Pollution Controls, Public Pressure," January 14, 2013.

⁴⁸ Xinhua, December 9, 2013.

⁴⁹ The BBC, "China pollution: First ever red alert in effect in Beijing," December 8, 2015, available at <http://www.bbc.com/news/world-asia-china-35026363>

⁵⁰ New York Times, "Concerns Grow About 'Severely Polluted' Water in China's Cities," February 20, 2013

⁵¹ The Asian Development Bank, *Toward an Environmentally Sustainable Future, Country Environmental Analysis of the People's Republic of China*, 2012, p. xviii

The Chinese government has indicated that it is taking steps to reduce energy consumption, boost enforcement of environmental laws and regulations, reduce coal usage by expanding the use of cleaner fuels (such as natural gas) to general power, and relocate high-polluting factories away from large urban areas, although such efforts have had mixed results on the overall level of pollution in China⁵². In addition, China has become a major global producer and user of clean and renewable energy technology. In January 2017, the Chinese government said it would spend \$361 billion on renewable energy power generation by 2020⁵³.

Economic Goals of the 19th Party Congress of the Communist Party

President Xi's report to the 19th Party Congress in November 2017 stated that socialism with Chinese characteristics had entered a new era. He stated that China would work to become a "moderately prosperous society in all respects" by 2050. Major goals include boosting living standards for poor and rural people, addressing income disparities (e.g., rich-poor, and urban-rural), making private consumption the driver of the economy, boosting services, reducing pollution, promoting innovation and economic modernization, and improving overall living standards⁵⁴. For example, the report states the following:

We will work faster to build China into a manufacturer of quality and develop advanced manufacturing, promote further integration of the internet, big data, and artificial intelligence with the real economy, and foster new growth areas

⁵² Bloomberg, "China Is Winning Its War on Air Pollution, at Least in Beijing," January 11, 2018, available at <https://www.bloomberg.com/news/articles/2018-01-11/china-is-winning-its-war-on-air-pollution-at-least-in-Beijing>

⁵³ Reuters, "China to plow \$361 billion into renewable fuel by 2020," January 4, 2017, at <https://www.reuters.com/article/us-china-energy-renewables/china-to-plow-361-billion-into-renewable-fuel-by-2020-idUSKBN14P06>

⁵⁴ China's goals are to achieve average annual GDP growth of 4.8% from 2020 to 2035 and 3.4% from 2030 to 2050. It seeks to achieve per capita GDP of \$20,000 by 2025 (making China a high income country), \$45,000 by 2035 (35% of U.S. levels).

and drivers of growth in medium-high end consumption, innovation-driven development, the green and low-carbon economy, the sharing economy, modern supply chains, and human capital services. We will support traditional industries in upgrading themselves and accelerate development of modern service industries to elevate them to international standards. We will move Chinese industries up to the medium-high end of the global value chain and foster a number of world-class advanced manufacturing clusters.

The report indicated that China would continue to pursue trade and investment reforms, noting the following:

We will adopt policies to promote high-standard liberalization and facilitation of trade and investment; we will implement the system of pre-establishment national treatment plus a negative list across the board, significantly ease market access, further open the service sector, and protect the legitimate rights and interests of foreign investors. All businesses registered in China will be treated equally.

However, the report emphasized the continued importance of the state sector and the government's continued role in various economic sectors:

We will improve the systems for managing different types of state assets, and reform the system of authorized operation of state capital. In the state-owned sector, we will step up improved distribution, structural adjustment, and strategic reorganization. We will work to see that state assets maintain and increase their value; we will support state capital in becoming stronger, doing better, and growing bigger, and take effective measures to prevent the loss of state assets. We will further reform of state-owned enterprises, develop mixed-ownership economic entities, and turn Chinese enterprises into world-class, globally

competitive firms.⁵⁵

Made in China 2025

The "Made in China 2025" initiative, announced in 2015, is one of several recently announced ambitious projects aimed at increasing the competitiveness of Chinese industries, fostering Chinese brands, boosting innovation, and reducing China's reliance on foreign technology by making China a major or dominant global manufacturer of various technologies⁵⁶. According to Chinese media, the initiative intends to "transform China from a manufacturing giant into a world manufacturing power" by 2049⁵⁷. For example, the plan states a goal of achieving 40% of domestically manufactured basic components and basic materials by 2020 and 70% by 2025. An updated version of the plan released in January 2018 said China aimed to become the world's leading manufacturer of telecommunication, railway, and electrical power equipment by 2025, and that China's robotics, high-end automation, and new energy vehicles industries would globally rank second or third by 2025⁵⁸. The methods the Chinese government plans to use to achieve its goals have raised concerns among U.S. firms and policymakers because they appear to involve large subsidies, protection of domestic industries, directed policies to purchase technology and IPR from abroad, increased pressure on foreign firms to transfer technology to do business in China, and what appears to be a goal of deliberately reducing foreign participation in China's markets.

⁵⁵ Xinhua, "Full text of Xi Jinping's report at 19th CPC National Congress," November 3, 2017, available at http://news.xinhuanet.com/english/special/2017-11/03/c_136725942.htm

⁵⁶ The 2015 "Made in China 2025" document identified these 10 for support. These ten key sectors are (1) next-generation information technology, (2) high-end numerical control machinery and robotics, (3) aerospace and aviation equipment, (4) maritime engineering equipment and high-tech maritime vessel manufacturing, (5) advanced rail equipment, (6) energy-saving and new energy vehicles, (7) electrical equipment, (8) agricultural machinery and equipment, (9) new materials, and (10) biopharmaceuticals and high-performance medical devices and

⁵⁷ Xinhuanet, "Made in China 2025" Plan Unveiled, May 19, 2015, at http://www.xinhuanet.com/english/2015-05/19/c_134251770.htm

⁵⁸ China Daily, "Made in China 2025 roadmap updated," January 27, 2018, at <http://www.chinadaily.com.cn/a/201801/27/WS5a6bb8b9a3106e7dcc137168.html>

In an interview on November 3, 2017, U.S. Trade Representative Robert Lighthizer stated that China's Made in China 2025 initiative was "a very, very serious challenge, not just to us, but to Europe, Japan and the global trading system."⁵⁹ " The USTR's 2017 annual report on China's WTO compliance focused heavily on the initiative, stating that Made in China 2025 differed from industry support by other WTO members in the level of ambition and scale of resources dedicated to obtaining its goals, and the USTR report warned that "even if the Chinese government fails to achieve the industrial policy goals set forth in Made in China 2025, it is still likely to create or exacerbate market distortions and create severe excess capacity in many of the targeted industries."⁶⁰

Challenges to U.S. Policy of China's Economic Rise

China's rapid economic growth and emergence as a major economic power have given China's leadership increased confidence in its economic model. Many believe the key challenges for the United States are to convince China that (1) it has a stake in maintaining the international trading system, which is largely responsible for its economic rise, and should take a more active leadership role in maintaining that system; and (2) further economic and trade reforms are the surest way for China to grow and modernize its economy. Lowering trade and investment barriers would boost competition in China, lower costs for consumers, increase economic efficiency, and spur innovation. However, many U.S. stakeholders are concerned that China's efforts to boost the development of indigenous innovation and technology could result in greater intervention by the state (such as subsidies, trade and investment barriers, and discriminatory policies), which could negatively affect U.S. IP-intensive firms.

⁵⁹ The interview is available at <https://www.youtube.com/watch?v=L03Np5ZLvM8>

⁶⁰ USTR, 2017 Report to Congress on China's WTO Compliance, January 2018, p. 10, available at <https://ustr.gov/sites/default/files/files/Press/Reports/China%202017%20WTO%20Report.pdf>

Opinions differ as to the most effective way to deal with China on major economic issues. Some support a policy of engagement with China using various forums. Others support a somewhat mixed policy of using engagement, when possible, coupled with a more aggressive use of the WTO dispute settlement procedures to address China's unfair trade policies⁶¹116. Others, who see China as a growing threat to the U.S. economy and the global trading system, advocate a policy of trying to contain China's economic power and using punitive measures, such as increased tariffs under Section 301, to either counter the negative impact of China's industrial policies on U.S. firms or push China to modify distortive and discriminatory policies (such as the Made in China 2025 initiative). Responding to China's BRI is viewed by some as a major challenge to U.S. global economic interests. While China's financial support of infrastructure projects in numerous countries could produce positive economic results, U.S. policymakers have expressed concerns that China will use BRI to mainly benefit its own firms, that the process of implementation of projects will not be transparent, that BRI participation could saddle countries with large debts, and that China will use the BRI to spread its economic system to other countries.

Major Conclusions

From the above analysis and narrative of China's economic rise, it can be deduced that the first, the 30 years between 1949 and 1978, was dedicated to the practical tasks of the political establishment of the People's Republic.

The second, from 1979 until 2012, is seen as the great period of domestic economic reform, and the internationalisation of the Chinese economy.

The third, now described as a 'new era', will be dominated by the transformation of China's economic growth model, as agreed at the 2013 Party Plenum, which is deemed to be

⁶¹ It is significant to note that the Trump Administration had not brought any WTO dispute settlement cases against China.

necessary for China to achieve its dual- centenary goals.

The previous growth model, based on high levels of state investment in State Owned Enterprises, combined with low wage, labour-intensive manufacturing for export, has served China well for three decades but rising wage levels now render it increasingly redundant.

The new growth model, by contrast, is based on private domestic consumption rather than public fixed capital investment, as the major driver of growth.

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2. Ibid
3. See Graham Allison in his latest paper from Harvard University.
4. Details of Indian Border with her neighbouring states will be useful to understand the pre independence baggage that India carries and continues to carry:
5. See in Print: <http://theprint.in/india/governance/babu-samjho-ishare-modis-critique-of-ias-evokes-shock-but-many-also-call-for-introspection/603341/>
6. China's economic reform process began in December 1978 when the Third Plenum of the Eleventh Central Committee of the Communist Party adopted Deng Xiaoping's economic proposals. Implementation of the reforms began in 1979.
7. World Bank, China Overview, March 28, 2017, available
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9. Some companies use China as part of their global supply chain for manufactured parts, which are then exported and assembled elsewhere. Other firms have shifted the production of finished products from other countries (mainly in Asia) to China; they import parts and materials into China for final assembly.
10. See CRS Report RL33536, *China-U.S. Trade Issues*, by Wayne M. Morrison.
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12. New York Times, *Mao's Great Leap to Famine*, December 15, 2010.
13. Purchasing power parities are a method used to measure and compare the economic data of other countries expressed in U.S. dollars. That method adjusts the data to reflect differences in prices across countries.
14. This reference appears to have meant that it did not matter whether an economic policy was considered to be "capitalist" or "socialist," what really mattered was whether that policy would boost the economy and living standards.
15. Many analysts contend that Deng's push to implement economic reforms was largely motivated by a belief that they would boost economic growth and thus strengthen the power of the Chinese Communist Party.
16. China's economic growth slowed significantly followed the aftermath of the Tiananmen massacre that occurred in June 1989. Several countries, including the United States, imposed trade sanctions against China, and Chinese economic reforms were essentially put on hold. China's real GDP growth rate fell from 11.3% in 1988 to 4.2% in 1989 and declined to 3.9% in 1990. In 1991, economic reforms were restarted and foreign sanctions against China were reduced or removed, and real GDP grew by 9.2%.
17. Xinhua net, "20 million jobless migrant workers return home," February 2, 2009.
18. IMF, *World Economic Outlook Database*, April 2019.
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20. Japan was able to become a high-income economy, but since the mid-1980s, its economic growth has been relatively stagnant.
21. These designations are based on World Bank per capita GDP measurements.
22. The classifications are determined by per capita income ranges (the thresholds of which are adjusted annually). These include low-income economies, lower-middle-income economies, upper-middle-income countries, and high-income countries.

23. Long-term economic projections should be interpreted with caution.
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seeks to achieve per capita GDP of \$20,000 by 2025 (making China a high income country), \$45,000 by 2035 (35% of U.S. levels), and \$120,000 by 2050 (half of U.S. levels).

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