

The 
Heritage Foundation



2024 China Transparency Report

Edited by Jeff M. Smith and Andrew J. Harding

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Jeff M. Smith
Washington, DC
January 2024

Preface

Today, the People’s Republic of China, controlled by the Chinese Communist Party (CCP), is the greatest existential threat that the United States faces. American citizens and policy-makers need to acknowledge reality: The United States and China are in a New Cold War.

The U.S.–China relationship is not just driven by “competition.” It is now overtly adversarial. To win the New Cold War, the United States must have a transparent understanding of the challenges and threats posed by the CCP.

The U.S. is dependent on Chinese supply chains for lifesaving pharmaceuticals and critical minerals needed for its economy and military. The CCP has infiltrated U.S. education systems, poisoning the minds of our youths and compromised Americans’ personal information with dangerous apps, such as TikTok.

The CCP has conducted sweeping corporate and traditional espionage campaigns that steal American intellectual property and imperil the sensitive information of its citizens. The CCP threatens U.S. national security by rapidly expanding its military and menacing American allies in Asia and throughout the world.

The CCP has deliberately covered-up—and not been held accountable for—the origins of the COVID-19 pandemic that killed countless

vulnerable Americans and others around the globe. The CCP’s lack of transparency is nothing new; in fact, it is part of a larger strategy to deliberately conceal information and deceive its adversaries.¹

These are not merely claims; they are carefully formed assessments by The Heritage Foundation’s world-class team of experts and analysts. But such assessments are only possible with credible, in-depth, and transparent data.

The Heritage Foundation’s China Transparency Project, launched in 2020, provides the necessary data and analysis to understand America’s greatest adversary.

Now, The Heritage Foundation is proud to release the *2024 China Transparency Report*. This edition, which examines both the level of transparency in official Chinese data and highlights private efforts to track information coming out of China, is a vital resource for open-source information on the domestic and foreign activities of the CCP and the effectiveness of various efforts to analyze these trends.

This project offers political leaders and policy-makers a trove of data and resources necessary to plug gaps in our knowledge and generate policy solutions to protect American interests and expose the CCP’s shortcomings.

In The Heritage Foundation’s landmark 2023 report, “Winning the New Cold War: A Plan for Countering China,” I noted that our work to combat the CCP was just getting started. The *2024 China Transparency Report* is the next step of Heritage’s commitment to the everyday American that it will continue to stand firm against the CCP.

In honor of President Reagan’s legacy, the *2024 China Transparency Report* equips our

leaders to both shine a light on and bring the heat to the CCP. As he famously said, “When you can’t make them see the light, make them feel the heat.” The American people take the threat from China deadly seriously; it’s time for our leadership to do the same.

Kevin D. Roberts, PhD, President
The Heritage Foundation
January 2024

Introduction

The Heritage Foundation's *2024 China Transparency Report* assesses the current state of the People's Republic of China's (PRC's) forthcomingness on eight key issues. It does so by analyzing the data, or lack thereof, provided by the Chinese government, and highlights measures by private organizations and researchers to fill in the (very wide) gaps using open-source data.

Why is transparency important? The report addresses this question for each of eight categories: (1) the economy, (2) energy and the environment, (3) human rights, (4) influence operations, (5) the military, (6) outbound investments, (7) politics and law, and (8) technology.

Broadly speaking, transparency is important because the Chinese government has a history of withholding, manipulating, and falsifying data for its own purposes. As U.S. policymakers address the China challenge, access to reliable data becomes increasingly important. Reliable data help to provide accurate assessments of China's capabilities, expose areas in which China poses the greatest threat to U.S. interests, and examine where threats may be overstated or vulnerabilities may be exploited.

While the editors of the report acknowledge that virtually all governments have some transparency issues, the Chinese government's lack of transparency is alarming on two fronts.

- First, the nature of the Chinese communist system exacerbates the lack of transparency. Because control is its utmost priority, the Chinese Communist Party (CCP) benefits from repressing data that do not fall in line with its narratives.
- Second, the U.S.–China competition and the policies made today will have consequences for generations to come. As such, it is critical that U.S. policymakers have access to accurate data to create sound policy.

The report is not a comprehensive review of every available transparency initiative: It is a survey of the field. The project seeks to raise awareness about ongoing private efforts and their methodologies while identifying areas with additional research needs. The editors hope that this report will encourage not only more data-driven analysis within the policy community but also cross-fertilization between categories.

While the focus of the report is primarily on private, non-governmental research, governmental agencies are instrumental in data collection as well. Unless stated otherwise, The Heritage Foundation does not claim ownership of the data projects mentioned in this report.

In addition to an assessment of the eight categories, this report also features six topical essays primarily written by external authors:

- **“‘Exert a Crushing Blow’: Beijing’s Strategy of Gradual Genocide in Xinjiang,”** by Victims of Communism Memorial Foundation Senior Fellow and Director in China Studies Adrian Zenz, PhD. This essay examines the details and intent behind Beijing’s policies of mass internment and draconian birth prevention measures in its northwestern Xinjiang Uyghur Autonomous Region. Based on new evidence from classified internal state documents, this essay argues that Beijing is intent on targeting Uyghurs and other ethnic groups in ways that constitute a gradually unfolding genocide. There is an abiding need to promote transparency with respect to the CCP’s efforts to curtail human rights.
- **“In Sight, Out of Mind: Shortcomings in Safeguarding the Defense Industrial Base from China,”** by Hudson Institute Senior Fellow and former U.S. Deputy National Security Advisor for Strategy Nadia Schadlow, PhD, and Heritage Research Assistant Andrew J. Harding. After analyzing nine annual Industrial Capabilities Reports to Congress from fiscal years 2013 through 2021, this essay argues that the Department of Defense has consistently reported many of the same vulnerabilities to the defense industrial base but has proven unable to address or remedy them. China has, therefore, been able to both cause and exploit vulnerabilities, ranging from establishing domain market shares over important products and resources to becoming the sole supplier for essential compounds needed for munition production. Unless the U.S. Department of Defense makes meaningful, transparent progress on resolving vulnerabilities, it will not deliver the necessary results needed to reorient America’s defense posture and safeguard American interests.
- **“Chinese Influence Strategies Are Putting the Pacific Islands on the Front Line—Again,”** by Foundation for Defense of Democracies non-resident Senior Fellow Cleo Paskal. This essay investigates Chinese malign influence campaigns in the Pacific Islands region at a time when U.S. influence in the region is waning relative to China. While the U.S. aims to reengage with the region, China’s years-long campaign to enhance its influence and access have granted it growing leverage in the region. The Solomon Islands serve as a notable case study for understanding Chinese strategy in the region. The essay offers recommendations for the U.S. and Pacific Island countries to counter Chinese political warfare and improve engagement efforts.
- **“China and the COVID Data Crisis,”** by Professor and Director of The Hanlon Financial Systems Center at The Stevens Institute of Technology George Calhoun, PhD. This essay surveys the data gaps and distortions created by China’s systematic suppression of COVID-related information and reviews independent estimates of the true impact of the pandemic in terms of infection and mortality in the Chinese population. COVID impacted China much worse than was portrayed in official statistics, and China has suppressed key and even basic data surrounding the true impact of COVID within China. Beijing’s deliberate coverup has imposed terrible costs—not just on the rest of the world—but on its own citizens.
- **“How Wall Street Funds China’s Rise,”** by President & CEO of the American Securities Association and former special counsel to a U.S. Commodity Futures Trading Commissioner and the U.S. House of Representatives Committee on Financial Services Christopher A. Iacovella. This essay argues that Beijing has used the openness of the international financial and economic system to increase its global influence and amass leverage over the United States and its allies, resulting in a world that is less open and more authoritarian. This includes military, cyber, and geopolitical strategies aimed at undermining U.S. economic and national security. China could not have done this without the active and willing support of international investors—particularly those in the United States.

- **“How One Man-Rule Renders Chinese Policymaking as Opaque—and Ineffectual—as Ever,”** by Jamestown Foundation Senior Fellow and adjunct professor at the Chinese University of Hong Kong Willy Wo-Lap Lam, PhD. This essay argues that General Secretary Xi Jinping’s prioritization of personal loyalty over established conventions has caused the CCP to make controversial policy decisions—and risks complicating future policy goals and political stability. With Xi forming a personality cult, as well as the restitution of Maoist leadership practices, Chinese policymaking and policy execution are even more non-transparent and non-democratic than was the case under Xi’s predecessors.

Executive Summary

The Chinese government has a long and documented history of withholding, manipulating, and falsifying data. The Heritage Foundation's *2024 China Transparency Report* assesses the current state of the People's Republic of China's (PRC's) forthcomingness on eight key issues. It does so by analyzing the data, or lack thereof, provided by the Chinese government, and it highlights measures by private organizations and researchers to fill the gaps.

As U.S. policymakers address the China challenge, access to reliable data becomes increasingly important. Reliable data help provide accurate assessments of China's capabilities, expose areas where China poses the greatest threat to U.S. interests, and examine where threats may be overstated or vulnerabilities may be exploited. This report examines the state of transparency across eight categories: (1) the economy, (2) energy and the environment, (3) human rights, (4) influence operations, (5) the military, (6) outbound investment, (7) politics and law, and (8) technology.

The report is not a comprehensive review of every available transparency initiative: It is a survey of the field. The project seeks to raise awareness about ongoing private efforts and their methodologies, while identifying areas with additional research needs. The editors hope that this

report will encourage not only more data-driven analysis within the policy community but also cross-fertilization between categories.

Although the focus of the report is primarily on private, nongovernmental research, governmental agencies are instrumental in data collection as well. Unless stated otherwise, The Heritage Foundation does not claim ownership of the projects mentioned in this report.

Economy

Quantifying the economy of 1.4 billion individuals in China is a colossal task. It requires defaulting to broad, macro-level data and trends. One common method is to look at the components of China's gross domestic product (GDP). This measure includes the total of consumption, investment, government spending, and net exports within China.

There are two problems with measuring China's GDP, however. The first problem is common to every country: GDP is an imperfect model that fails to fully reflect a country's welfare. China may have one of the world's largest GDPs, but its GDP per capita (or GDP per person) is one-fifth the size of those in the world's most advanced economies. A better assessment of the welfare of China's economy requires more inputs than GDP. Even GDP per

capita is an insufficient measure of the wealth of the Chinese people.

The second problem is that GDP accounting is corruptible. Chinese government officials, both at the provincial level and at the national level, can falsify numbers to make it seem as if China's economic growth is stable, if not improving. Government actions such as increasing investment and government spending can create the impression that GDP is growing when components such as consumption are decreasing (which might reflect a poorer economy). The Chinese Communist Party (CCP) is known to have officially undercounted growth as well at times.

An accurate assessment of the health of China's economy is important because most public policy analysts are not economists. Many simply reflect on the size of the Chinese economy and related trends. This ignores many of the problems China faces as an increasingly restrictive socialist economy.

Understanding the strengths and weaknesses in China's economy will give analysts a better picture of the world's second-largest economy. But because of China's lack of transparency—and its careful management of the official data it does release—there has been far too much focus on its strengths and far too little on its weaknesses.

Many kinds of economic data can be found through China's National Bureau of Statistics (NBS): information on China's GDP, population size, and wage and income rates; its travel, retail, and education industries; and more. Provincial government data feeds into the information collected by the NBS. Other government agencies also publish more in-depth information on industries they cover, such as trade or the digital economy, but much of that topline information is eventually published by the NBS, too. While some of the data that NBS publishes may be more reliable—trade statistics, for example, because they can be compared to other countries' statistics—others, such as GDP and employment numbers, are more questionable.

There are some prominent for-pay resources that can be used to analyze China's economy—resources that are often employed by companies and individuals that are invested in or planning to invest in China—but there is far less open-source

information that is as comprehensive and available to the public. The following are a few examples of the open-source resources:

- MacroPolo: "China's Debt Hangover";²
- Milken Institute: "Best-Performing Cities China";³
- Center for Strategic and International Studies: China Power Project;⁴ and
- Caixin Global: Purchasing Managers' Index.⁵

Assessment

The data provided by the Chinese government on its economy has significant gaps. While China is fairly transparent with data on consumption, wages, and employment, there is a lack of information on the nature of government control over Chinese state-owned enterprises (SOEs) and businesses. Official data on SOEs lack basic firm-level statistics. When it comes to debt and government spending, the central government seems more transparent than local governments. Local debt is more complicated, and much is off-budget. There is also a severe lack of reliable data from the Chinese government on subsidies and aggregate GDP figures.

Private efforts have helped fill some of the gaps in data, especially regarding the nature of government control over Chinese SOEs and businesses. Private efforts have also significantly improved transparency on Chinese government's subsidies and China's GDP. That said, these efforts have not been able to provide sufficient data on Chinese government spending and debt, as this area of transparency must be provided by the Chinese government.

One research area that could have a significant impact on transparency is the actual efficiency of China's economy. Generally speaking, the efficiency of an economy is based on what is being produced given a country's labor, capital, and technology. Measuring what is actually produced based on these inputs is sometimes referred to as total factor productivity. China has plentiful labor and capital compared to many other economies, but whether these are being used efficiently is questionable.

Energy and Environment

While energy and environmental issues are often viewed independently, there is substantial interplay between them. Energy policy can have both positive and negative effects on environmental quality, and environmental policy impacts access to energy resources and, therefore, development. Together, they provide an important benchmark for evaluating human well-being.

Categories of energy data include energy production and use by source of energy, end use by sector, and imports and exports. They also encompass energy infrastructure investment, energy poverty, and energy consumption per dollar of GDP. Reliable trend data in these areas can help evaluate how China's energy mix is changing or not changing, and how these data reflect environmental priorities.

China's commitment to transparent and reliable data is important chiefly for the Chinese people, who must live with the consequences of energy and environmental policy, and is also of interest internationally given China's status as the world's largest polluter. Energy use and a healthy environment strike close to home because they are the core building blocks of well-being and livelihoods. Affordable, reliable energy is a necessity for families, but so too is a clean, sound environment. China's pollution is directly responsible for a number of serious public health problems, declines in worker productivity, migration patterns, and harm to people's well-being.⁶ Clear, objective data can identify where problems exist and incentivize data-driven solutions.

Free economies are generally cleaner economies,⁷ not only because these societies possess greater wealth to improve their environments but also because the tools of stewardship—property rights, rule of law, transparency and accountability, incentive to innovate and become more efficient—contribute to environmentally sustainable economic outcomes. Unfree economies, such as China's,⁸ put those tools and accountability for them largely in the hands of government and party authorities—where conflicts of interest negate their effectiveness.

After decades of fraudulent, inconsistent, nonexistent, or undisclosed national data and anecdotal evidence of poor environmental

stewardship, the Chinese government does not have a reputation for reporting energy and environmental data consistently or accurately. It has been caught withholding or misrepresenting data on multiple occasions by its own citizens,⁹ nongovernmental organizations,¹⁰ and U.S. government resources.¹¹ In recent years, however, pressure—whether from the Chinese people or from other countries—has helped to create accountability and drive governmental change, for example, with respect to monitoring and publishing data on air quality.

In the past, the Chinese government has treated some energy and environmental data as state secrets, but in other cases, the absence of consistent data is due to the sheer complexity and magnitude of data collection across all of China's provinces. For example, a joint project between China and the United States to build a Chinese Environmental Public Health Tracking system has been complicated by the difficulty of “collecting, integrating, analyzing, and interpreting environmental and health data at various administrative levels ranging from provinces and cities to counties and villages.”¹² This is important because environmental policies in one city or province affect economic decisions and environmental outcomes in others. The ability to aggregate all these data is essential if one is to understand the magnitude of China's environmental problems.

Independent data from external sources have also shed light on Chinese investment and patterns in global energy markets. For example, the Mercator Institute for China Studies, which maintains a database of spending on Belt and Road Initiative (BRI) projects, estimates that “about two-thirds of Chinese spending on completed BRI projects went into the energy sector, and already amounts to more than 50 billion USD.”¹³

Given the lack of scope and resources, it is extremely difficult for independent data to capture a full picture of energy and environment realities in China. For example, Yale, Columbia University, the Chinese Academy for Environmental Planning, and the City University of Hong Kong attempted to develop an environmental assessment of each of China's provinces but “concluded that data gaps, a lack of transparency, and inconsistencies in China's baseline official data were too prevalent

to allow for the construction of a consistent and comparable provincial China Environmental Performance Index.”¹⁴

Nevertheless, independent efforts to generate and organize data have proved to be and will continue to be critical to achieving more accurate and transparent access to information in China. The following are a few examples of these open-source resources:

- Yale Center for Environmental Law and Policy: Environmental Performance Index;¹⁵
- Boston University, Global Development Policy Center: China’s Global Energy Finance Database;¹⁶
- Global Energy Monitor;¹⁷
- Our World in Data;¹⁸
- Climate Watch;¹⁹ and
- Henry L. Stimson Center: Mekong Dam Monitor.²⁰

Assessment

The Chinese government’s transparency on energy and environment varies depending on the type of data. Whereas they are very transparent when it comes to air-quality data, there is nearly zero transparency on water and land management and climate data. What little is provided is often not verifiable or is disputed by external actors. Energy production data tends to be more available because it is produced by SOEs that are listed and floated on local, and sometimes global, stock exchanges.

Private efforts continue to greatly improve transparency on energy and environment. These efforts have been instrumental in filling gaps in data on energy production, climate data, and water and land management. To note, private efforts have not made as much of an impact on air quality, as the Chinese government has been reporting indicators for air quality for more than a decade. These indicators provided by the Chinese government match the indicators provided by non-government efforts. However, there are

plenty of opportunities to fill gaps in data and to pursue further research.

The first is increased third-party participation. A 2020 article in the *Journal of Environmental Management* found that increased third-party monitoring improved the data on air quality in China.²¹ The editors concluded that the evidence “supports China’s efforts to advance its environmental governance from a mono-centric and non-participatory policy process to one that integrates both authoritarian control and market-based mechanisms.”²² To the extent possible, more third-party monitoring should extend to the other environmental indicators mentioned in this chapter. This is particularly true where the quality of data is poor, such as indoor air quality, drinking water, surface water, and soil toxicity.²³

Another potential avenue for research is more investigative in nature. China has hidden industrial projects and environmental data under the guise of “state secrets.” Like many other public policy issues, there is no clear understanding of how China formulates environmental policy. Consequently, researchers should investigate how environmental laws, regulations, and strategies are formulated. A better understanding of this would shed light on the progress, or lack thereof, in environmental data reporting and environmental progress.

Human Rights

The Chinese Communist Party has a consistent record of failing to protect and preserve the human rights of Chinese citizens.

While successive U.S. administrations have often viewed issues of human rights in China as peripheral, the CCP sees their suppression as central both to the country’s survival and to its own. At best, the U.S. government’s decision to sideline or deprioritize human rights concerns in broader strategies toward China has led to inconsistencies in U.S. policy; at worst, it has hamstrung U.S. strategy toward China.

There is, therefore, an abiding need to promote transparency with respect to the CCP’s efforts to curtail human rights. Civil society—including nonprofits, nongovernmental organizations, legal aid organizations, academics, and others—have sought to pull back the veil on the CCP’s efforts to

undermine freedom and human rights in China, but much work has yet to be done. However, while Chinese government data on these issues are often hard to track down, many researchers have found ways to shed light the trends.

The CCP is often very open about new laws or regulations that it puts into place. In 2018, the CCP instituted new regulations on religious affairs.²⁴ Although it does not acknowledge that they restrict a person's ability to practice his or her faith, the regulations do violate international standards of religious freedom. Regulations such as these provide insight into the CCP's policies and often inadvertently reveal information about human rights conditions inside China.

The government of China publishes other ostensibly unrelated data that, for example, outline security expenditures or job postings in the security sector that speak to an increased level of securitization in the Xinjiang region. Researchers use this information to draw inferences about broader trends about the government's policies and rights abuses. Thus, while the CCP may not be especially transparent about the data it releases or the trends that it observes, creative researchers can use threads of data on other subjects to get a clearer understanding of the bigger picture with respect to the CCP's violations of human rights.

There is much independent critical, data-driven research and reports on violations of human rights in China. In recent years, civil society has devoted significant attention to pulling back the veil on the CCP's human rights abuses. Reports have drawn on Chinese government data, ingeniously reverse-engineered technology used in the violation of rights, and collected firsthand testimony; this work has shed a much-needed light on the severity of the situation.

The following is a representative sample of the cutting-edge, data-driven projects that are contributing to these efforts:

- Xinjiang Victims Database;²⁵
- Human Rights Watch: "Algorithms of Repression";²⁶
- Tibetan Centre for Human Rights and Democracy: Tibetan Political Prisoner Database;²⁷
- Hong Kong Watch: Political Prisoner Database;²⁸
- Open Doors: World Watch List: China;²⁹
- Freedom House: "Freedom in the World: China";³⁰ and
- ChinaFile: State of Surveillance.³¹

Assessment

The Chinese government is deliberately opaque when it comes to human rights. While there are data reported by the Chinese government, the data provided have been widely criticized as inaccurate and categorized as propaganda. Data that deviate from the Chinese government's narrative are either quickly removed or not readily available.

Private efforts struggle to improve transparency on human rights, given the complete lack of transparency from the Chinese government. These efforts have been instrumental in uncovering the Chinese government's actions in Xinjiang. Transparency efforts regarding Hong Kong have notably grown. Private efforts have also been instrumental in improving transparency on rule of law, freedom of speech, and religious freedom.

This report can serve not only as a resource for identifying information and reports that lend insight into the CCP's intentions and actions, but also to inspire future research projects that fill in the gaps in current research. In conducting research for this report, there appeared to be significantly fewer data-driven resources on the situation in Tibet and Hong Kong, especially as compared to Xinjiang. Some of this may have to do with the fact that some of the events and rights abuses are new and emerging (as in Hong Kong). In other places (such as Tibet), it may be more difficult to access information, or there may be less political will to conduct research on these subjects. Nevertheless, they merit further investigation.

In an episode of *China Uncovered*, a Heritage Foundation podcast within the China Transparency Project, researcher Adrian Zenz suggested that additional deep research is needed to gain a better understanding of the forms of forced labor carried out by the CCP.³² His own work has focused on Xinjiang and Tibet, and while there may be a

need for more research in both of these regions, more information on the CCP's historical use of reeducation-through-labor methods is also needed.

Future research should do a better job of unpacking some of the motivations for China's violations of human rights. A more thorough understanding of why the CCP does what it does will deepen the application of research in the policy context, particularly for policymakers focused on safeguarding U.S. national security and advancing U.S. interests.

Influence Operations

Influence operations are government operations aimed at changing foreign popular perceptions in order to enhance a country's global influence. A range of soft power tools are used in influence operations, from benign civilian exchange and cultural programs to military psychological operations. Likewise, the content of influence operations can, depending on the government in question, range from "white propaganda" (the origin of which is truthfully disclosed) to "black propaganda" (the origin of which is hidden or disguised).

Influence operations have been used in various forms by modern states for centuries and are widespread tools of foreign policy and military strategy. In their broadest application, influence operations represent an all-of-government approach focused on specific targets. However, influence operations can also be seen as a more general strategy to deal with future crises and generally enhance a country's global standing.

Influence operations are key to China's efforts to control and manage its image globally; extend its regional reach; dominate the narrative vis-à-vis Hong Kong repression, persecution of Uyghurs in Xinjiang, and Taiwan's de facto independence; and ultimately compete for global leadership with the United States.

The Chinese government and CCP are highly secretive about their influence operations, which are therefore not easily quantified through official Chinese data. Evaluation is made even more complicated by the sprawling structure of agencies and offices within the Chinese government and the CCP that contribute to the CCP's massive and well-funded propaganda efforts. As Lowy Institute

Senior Fellow and journalist Richard McGregor observes in his book *The Party*, "the big party departments controlling personnel and the media keep a purposely low public profile."³³

However, there are some relevant publicly accessible data, often available only in Chinese, such as registrations of organizations within government and party agencies. For example, the State Council's Ministry of Civil Affairs maintains a database of officially registered social organizations, including those registered under the United Front Work Department. The CCP and Chinese government system is not devoid of bureaucracy. Formal processes are used to effectively mobilize its agencies for major operations, necessarily generating information on their efforts.

While official data provide a very limited and incomplete picture of the scope and scale of Chinese influence operations, private efforts have helped unveil these operations by exploiting some of the various data sources listed above and utilizing technological tools. Translation applications and social media analytic platforms have made it easier to spot and analyze the data. The following is a sample list of cutting-edge private efforts helping to fill out the picture of Chinese influence operations:

- AidData: China's Global Public Diplomacy;³⁴
- Alliance for Securing Democracy: Hamilton 2.0 Dashboard;³⁵
- Alliance for Securing Democracy: Authoritarian Interference Tracker;³⁶ and
- MapInfluenCE.³⁷

Assessment

There are severe gaps in the data provided by the Chinese government with regard to influence operations. On one hand, there is some transparency provided by official data on health and economic diplomacy, and united front work (within Chinese-language sources). While there is some transparency provided by official data on health, economic diplomacy, and united front work (within Chinese-language sources), information on digital and cyber operations that

involve information manipulation is unsurprisingly hard to come by.

Private efforts have greatly improved overall transparency on the Chinese government's influence operations, particularly regarding digital and cyber operations. These efforts have also provided more transparency on health and economic diplomacy, and united front work. That said, more overall transparency is required on united front work.

The CCP's influence operations have received tremendous attention recently from the general public, media, and national governments. However, the available open-source research has only scratched the surface.

For further research, while the CCP's influence operations may be more focused on Western and developed nations, there need to be more studies of operations targeting underdeveloped and developing countries. These countries have limited access to international media outlets—and hence, less attention from the public—but significant exposure to Chinese state media and their affiliates.³⁸ Helping these countries counter China's malign influence is critical because these countries carry weight in the context of multilateral organizations. Additionally, while it has been an established understanding that China's influence operations are generally carried out under the two pillars of CPD and UFD at the top level of the party, there is still insufficient understanding of how this system works in spreading propaganda, forcing technology transfers, and/or recruiting overseas talent to benefit the Chinese regime. While there is some publicly available literature on the inner working of the Chinese influence apparatus thanks to the groundwork done by Hoover/Stanford and Georgetown University's Center for Security and Emerging Technology, more can and should be done.³⁹

More broadly speaking, there should be more evaluation of the actual effectiveness of the CCP's influence operations. It is one thing to become a target of influence; it is another thing to become influenced. Much discourse has focused on what the CCP is doing and identifying the targets of those operations, as it rightfully should. This has raised the alarm on the issue, therefore closer attention should be paid to the actual effectiveness of CCP influence operations.

Military

The realm of national security—including military affairs, intelligence activities, and internal security operations—is typically the most opaque sector of government, even in open democratic societies. In an authoritarian system such as the PRC, access to information is even more restricted.

Transparency about China's military is important because it provides researchers with a baseline of data for assessing the current state of, and ongoing trends in, the Chinese military. Understanding the Chinese military requires consideration of both its tangible and its intangible aspects.

China publishes a wide variety of information, including data about its military and security forces, but it does so in an often-incomplete fashion, omitting key details and figures. Thus, the People's Liberation Army (PLA) has published white papers for over two decades that have discussed such issues as the PLA's individual services, "military strategic guidelines" of the "Active Defense," and mobilization.⁴⁰ These biannual white papers have been the most authoritative sources of information on PLA doctrine and China's evolving military thinking.

But these same white papers provide little insight into many of the more basic aspects of the world's largest military, including such essentials as the Chinese military budget. At no time was a breakdown of the single aggregate Chinese defense budget figure (\$224.79 billion for 2023) ever provided to indicate how much might be spent on each service. It has never been clear exactly what activities—for example, military research and development (R&D), space infrastructure, or biological research—are included in this figure and, equally important, what activities are not.

Similarly, the work reports issued in conjunction with the National People's Congress (NPC) and CCP Congresses provide important data and signposts on major Chinese security initiatives. They have provided hints, for example, of the extent of Chinese internal security spending—but only sporadically. The announcement of the 14th Five-Year Plan (governing 2021–2025) noted that China's military was accelerating its efforts to become "fully mechanized and informationized,"⁴¹ but no details were forthcoming on exactly what those terms might mean and what metrics were

being employed, much less on how mechanized and informationized the PLA is now.

Open-source information is vital to any understanding of the Chinese national security establishment, Chinese strategic thinking, and therefore likely Chinese national priorities. This is especially true because the intelligence community is often much more focused on “current intelligence”: the who, what, where, when, and how of daily developments. The intelligence community has much less time for more in-depth examinations of issues such as national strategy, the evolution of military doctrine, and other “why” questions.

As noted, the International Institute for Strategic Studies produces the annual Military Balance, which provides basic data (numbers of troops, tanks, planes, warships, nuclear weapons, etc.) for every nation, including the PRC. For more than a decade, the China section has included an overview of the past year’s national security developments, including assessments of overall Chinese strategy, changes in force structure and organization, and major additions to the PLA’s order of battle.⁴²

Similarly, the Stockholm International Peace Research Institute publishes an annual yearbook that covers major military developments around the world. It includes assessments of Chinese and other military expenditures, recent arms control agreements, and arms transfers.⁴³ The following are a few examples of these open-source resources:

- The Australian Strategic Policy Institute: China Defence Universities Tracker;⁴⁴
- Center for Strategic and International Studies: Asia Maritime Transparency Initiative;⁴⁵ and
- National Bureau of Asian Research and Sasakawa USA: Maritime Awareness Project.⁴⁶

Assessment

While the Chinese government is not very transparent with regard to its military, it is somewhat more transparent in comparison to other categories within this report. Military size is slightly better documented by the Chinese government, but is still incomplete and without much

detail. Details on military armaments outside of images are limited from the public. There is a lack of transparency on PLA activities and arms sales by the Chinese government. PLA activity can be seen, but the official information is lacking as it is often not reported.

Private efforts have been most impactful in providing transparency on arms sales by the Chinese government and tracking PLA activities and movement. Other areas—such as doctrine, private reform efforts, and policies—have also become more transparent because of these efforts.

Given China’s translucent, if not opaque, nature, there is an enormous range of areas that could benefit from sustained open-source research. With the massive reform of the PLA in 2015—which saw a complete overhaul of the Central Military Commission, the transformation of seven military regions into five war zones/theaters, and the creation of several new services—each area includes a wealth of topics. For example:

What are the functions of each of the 13 offices, commissions, and departments that now comprise the new Central Military Commission? How do these relate to each other in terms of seniority and staffing? How are each of these staffed? For example, are they predominantly from the ground forces (now a separate branch), or are they deliberately made joint?

What is the structure of the war zones? Do they all follow the same organizational approach, or are they customized to their environments? For example, how does the western war zone, which has no maritime border, compare with the eastern or northern war zone?

What is the structure of the new services (PLA Ground Forces, PLA Rocket Forces, PLA Strategic Support Force)? How do they recruit and train their forces? How do they relate to the other services (PLA Navy, PLA Air Force) in terms of seniority? How are they represented in the war zone headquarters? For example, are there more senior PLA Air Force officers in one than there are in another?

Similarly, the steady modernization of the PLA, and especially the ongoing emphasis on “informationization” of the force, raises a host of questions. Specifically:

- How does the PLA train its forces to accommodate the new technologies? How successful have these efforts been thus far?
- How well has the PLA developed a cadre of noncommissioned officers (the backbone of Western militaries), and how do they relate to the unit's political officers, who are responsible for, among other things, monitoring the welfare of the enlisted personnel?
- What is the process for acquiring more advanced weapons from the SOE system, and what has been the impact of efforts to inculcate "civil–military fusion"? How responsive are elements of China's military–industrial complex to changing requirements as defined by their customers, the PLA?

Outbound Investments

The Organization for Economic Co-operation and Development defines foreign direct investment (FDI) as a "category of cross-border investment in which an investor resident in one economy establishes a lasting interest in and a significant degree of influence over an enterprise in another economy."⁴⁷ Broadly defined, FDI can assume multiple forms, including an entity constructing new factories or power plants, expanding existing businesses, providing loans to overseas subsidiaries, acquiring voting stocks, mergers and acquisitions, and joint ventures.

Horizontal FDI generally refers to funds invested abroad in the same industry: for example, a retail clothing store in China opening a new branch in the United States or purchasing a competing clothing store in the United States. Vertical FDI generally refers to investments up and down the supply chain: for example, a retail clothing store purchasing the garment manufacturer that supplies the clothing that it sells.

Finally, different definitions may include or exclude different classes of FDI. Some definitions, for example, limit FDI to investments that net at least 10 percent of voting power in a firm, distinguishing FDI from short-term portfolio investment in stocks.

Developing countries have a compelling need for trillions of dollars in infrastructure

investments, and in some cases, Chinese sources have been their only options for financing and construction. In several developing economies, Chinese investments in infrastructure, energy, and connectivity projects have improved economic performance, infrastructure, and productivity, enhancing living standards and propelling economic growth. In a number of high-risk developing economies, Chinese lenders and investors have financed projects deemed too economically or physically risky by more traditional Western and international lenders.

However, in more than a few cases, Chinese FDI flows have proven a double-edged economic sword, providing economic benefits that are either limited—in some cases to small groups of business elite, leadership networks, or Chinese firms themselves—or outweighed by economic costs. Chinese investments, particularly large-scale infrastructure projects, have frequently and credibly been criticized for failing to meet international financial and technical standards, for lacking transparency, and for contributing to irresponsible debt practices. The BRI is littered with examples of projects that have been hand-picked by autocratic elites and would not have met international standards widely adopted by more traditional lenders. While there are bright spots, the dark underbelly of the BRI is a trail of non-performing loans, unfulfilled promises, at-risk economies, and white elephant projects.

In a number of cases, Chinese outbound FDI (OFDI) has brought not just unfavorable economic consequences but adverse strategic ramifications. Chinese investments, particularly in sensitive infrastructure projects and telecommunications networks, have repeatedly drawn espionage concerns. National security concerns have led numerous capitals worldwide to restrict Chinese telecom giant Huawei from assuming a role in developing their 5G networks.

The Chinese government regularly reports on trade and investment statistics, principally through the NBS and Ministry of Commerce. However, while these statistics are sometimes corroborated by more reliable sources, China is often accused of manipulating its economic statistics—whether at the federal, regional, or local level—to serve the CCP's interests.

OFDI statistics can be more difficult for the Chinese government to manipulate, particularly when the counterparty is an advanced economy, as the figures are generally corroborated by the destination of the investment. However, even when Chinese OFDI statistics are accurate, there are numerous cases of planned foreign investments that, for a variety of reasons, fail to materialize. And while there is often much publicity around “new” investments, the cancelation or scaling down of proposed investments often goes unreported.

In recent years, there has been a dramatic proliferation of new research initiatives, particularly in the United States but also further abroad, that are devoted to tracking Chinese FDI statistics and analyzing their implications. The growth in the number of Chinese FDI “trackers” is partly a result of the exponential growth in Chinese OFDI flows beginning in the mid-2000s and peaking in 2016.

The prominent attention now being accorded to Chinese OFDI is also a result of the geopolitical character that these investment flows have assumed, particularly since the 2013 announcement of the BRI and the growing resources and attention that the BRI began to command in the years that followed. The BRI became a legacy project of Chinese General Secretary Xi Jinping and was enshrined in the Chinese constitution in 2017. Since then, however, the BRI has faced a growing international backlash.⁴⁸ In recent years, it has also suffered from a decline in new projects that roughly parallels the decline in Chinese OFDI flows.⁴⁹

Today, several prestigious think tanks and research institutes host a variety of Chinese OFDI trackers, each with different emphases and different sets of tracked data and variables. Some are global in scope, tracking Chinese investments wherever they materialize, some look only at certain categories of investments, and some are focused on specific regions. The following are some of the most prominent Chinese OFDI trackers now in use:

- American Enterprise Institute: China Global Investment Tracker;⁵⁰
- AidData: “Mapping China’s Global Investments and Inequality”;⁵¹

- Boston University Global Development Policy Center: China’s Global Power Database;⁵²
- Stimson Center: Mekong Infrastructure Tracker;⁵³
- Inter-American Dialogue and Boston University Global Development Policy Center: China–Latin America Commercial Loans Tracker;⁵⁴ and
- Rhodium Group and National Committee on U.S.–China Relations: U.S.–China Investment Project.⁵⁵

Assessment

There are severe gaps in the data provided by the Chinese government regarding outbound investments. There is a near complete absence of official data on Chinese loans—specifically, information on the terms on which these loans have been provided. The Chinese government’s defense-linked outbound flows are also not transparent. For example, China reports the majority of its outward investment as occurring in Hong Kong, when it in fact passes through Hong Kong. BRI projects and Chinese aid are slightly more transparent.

Private efforts have been instrumental in providing more transparency on BRI projects, FDI, loans, and aid. FDI is tracked more closely on the receiving end. Even with private efforts, defense-linked outbound investments are still very non-transparent.

There continue to be ample opportunities for additional research in this field beyond the expanding number of existing efforts. Many projects are now evaluating Chinese investments on a regionwide basis, but there is room for more data collection and analysis at a subregional level. The Stimson Mekong Infrastructure Tracker offers a great example and model for such an initiative.

To date, ongoing research efforts have focused largely on the “what” and “where” of Chinese investments. Less attention has been paid to how these investments are affecting the host countries and the regions at large. Specifically, there is a need for greater focus on the impact of Chinese investments on local governance, institutions, and populations.

Politics and Law

The PRC is governed by the CCP. Chinese politics therefore includes both the politics of the state (at various levels) and intraparty politics. The politics of the Chinese state, even when only discussing domestic politics, span a wide range of issues.

Another aspect of Chinese politics is Beijing's dealings with outside countries, groups, and international organizations. As with Chinese domestic politics, understanding Chinese foreign policymaking is complicated by the very different structures and approaches that characterize the PRC. Because of the CCP's extensive reach, as well as China's "market socialist" system, the PRC has a much wider array of tools at its disposal for the conduct of foreign policy. Chinese SOEs, for example, can make decisions based in part on broader national objectives and are not as constrained by concerns about returns on investment. The Chinese government can invite foreign students to come to Chinese universities because the state runs the educational system. At the same time, the government can support various educational outreach efforts abroad, including Confucius Institutes—which are managed by a body within the Ministry of Education—as well as direct Chinese students abroad. This means that the range of Chinese foreign politics is as extensive as the range of its domestic politics.⁵⁶

Another consideration in assessing China is the country's evolving legal situation. Because China is an authoritarian state ruled by the CCP and considering its millennia-long history of rule by law rather than rule of law, it might seem paradoxical that China's legal situation should be a focus for Western analysts.

However, China's legal code affects how the Chinese interface with foreign entities, especially corporations and other businesses. China's legal structure is arguably better developed in the realm of commercial law, precisely because various Chinese and foreign companies interact both in the PRC and abroad. Support for China's pursuit of initial public offerings and listings on global stock markets, as well as its participation in international supply chains, requires some degree of legal infrastructure.

In addition, because China is a rule-by-law society, it creates legal scaffolding to justify various

other politics. Thus, China has passed a range of laws—including the National Security Law, the National Espionage Law, and the National Cybersecurity Law—to justify accessing a variety of data from both Chinese and foreign corporate entities. The Chinese government does so not by fiat but by referencing these various laws. An understanding of these laws can therefore provide indications of Chinese interests and rationales.

Given the holistic, comprehensive approach that China takes toward accumulating "comprehensive national power," China's political activities overlap with its economic, diplomatic, and military actions. Grasping China's objectives therefore requires understanding the organization of both the CCP and the Chinese state: the relative rankings of individuals in terms of both the state and party hierarchies and their relationships to businesses, the military, and other entities.

To provide insight into Chinese developments, the PRC's State Council Information Office publishes a variety of white papers that provide the single-most authoritative position about Chinese policies on a given subject. The white paper production process requires bureaucratic reconciliation and agreement before publication and therefore represents the consensus view on a subject within the PRC government. Another source of information is the annual reviews, reports, and statements from various Chinese ministries. The Ministry of Foreign Affairs, for example, has long issued annual reviews of China's diplomatic activities.⁵⁷

Work reports associated with the CCP Party Congress and the full session of the NPC are issued every five years or so. Such conclaves lay out the expected policy direction for the next five years, set forth at the party congress, as well as key implementation efforts set forth at the NPC. Both the national and provincial governments, as well as ministries, also typically provide work reports that review the gains and advances since the previous "two big" meetings. These reports provide important glimpses into both successes and failures—based in part on what is not reported or discussed.⁵⁸

Another important source of political insight is the five-year plan. Despite shifts away from the dead hand of centralized economic planning,

the PRC continues to produce five-year economic plans for the substantial portion of the economy that remains under state ownership at all levels. These plans serve as indicators of key priorities and national efforts. The overall five-year plan also sets guidelines and boundaries for subsidiary five-year plans (for example, within each ministry). Both the overall five-year plan and ministry-specific five-year plans also feed into other Chinese planning, such as medium-term and long-term plans in aspects of science and technology.

Reports, laws, and drafts provide additional information. Some of these documents are released in conjunction with the annual meetings of the NPC. These set economic targets (usually in line with the five-year plan) as well as key legislation and major decisions on a variety of topics. Apart from the plenum-related documents are other Chinese plans and projects, such as “Made in China 2025” and “China Standards 2035,” which further detail Chinese objectives.⁵⁹

A wide variety of groups are monitoring various aspects of Chinese political developments, exploiting some of the various data sources noted above. They include:

- China Digital Times;⁶⁰
- China Leadership Monitor;⁶¹
- Center for Advanced China Research;⁶²
- Paulson Institute MacroPolo: The Committee;⁶³ and
- University of California–San Diego China Data Lab: CCP Elite Portal.⁶⁴

Assessment

The Chinese government scores low on transparency of its politics. Overall party membership is published annually, but there is little information of the makeup besides age. This has become worse over time: Government structure is generally well reported except for leaders of the party leading groups, which remain secretive in some cases. The activity of the leadership is reported, except in particularly sensitive policy areas. In recent years,

transparency in the publication of government decrees, even in economic policies, has worsened.

Private efforts, while still beneficial, have not made nearly enough impact on the transparency of China’s politics. In most cases, access to the data on political issues is guarded by the CCP. If the Chinese government does not publish data, then there is little private efforts can do to gather in the public domain. This will remain the case unless Beijing implements new regulations to improve ease of access, which does not appear to be on the CCP’s agenda. In fact, the opposite is more often true. The CCP purposefully restricts public access to an increasingly large array of political and economic data—leaving observers to rely more on speculation and unsubstantiated reports by supposed “party insiders” speaking to media.

As the PRC has become stronger, instead of becoming more transparent, Beijing has become more opaque. In many ways, the CCP has never been transparent. More recently, however, the CCP has tried to discourage analysis of Chinese politics. These efforts range from steadily reducing access to Chinese databases, to discouraging foreign academics and institutions from analyzing sensitive topics (such as treatment of the Uyghurs), to openly harassing both domestic and foreign scholars.

This reduction in transparency makes open-source analysis ever more urgent because of the greater need to understand how the Chinese political system is functioning. This need, however, has not led to an increase in academic study of the Chinese political process. There is a significant unmet demand for more informed analysis of all aspects of Chinese politics. There is plenty of room for more analysts to examine the background of China’s top leaders, and official biographical data published by the Chinese government itself set the stage for more detailed research into topics from career trajectories to factional networks.

Similarly, a better understanding of China’s top ministries, the interplay between chief executives of state-owned enterprises and the national political leadership, and studies of provincial leadership trends could yield data that enhance understanding of the interplay between Chinese economics and politics—which differs from that which plays out in the West—and may lead to additional insight into the next generation of Chinese leaders.

In the immediate term, researchers could contribute substantially to the understanding of contemporary political trends in China by examining publicly available biographical data of leaders beyond the politburo and cabinet to seek understanding of emerging generational divides and to find early indications of factional rivalries among Xi's overlapping relationship networks.

Technology

In 2015, the role and importance of technology was highlighted in the PRC's Made in China 2025 industrial policy plans.⁶⁵ More recently, on March 5, 2021, CCP leadership released the 14th Five-Year Plan for the National Economic and Social Development of the People's Republic of China and the Outline of Long-Term Goals for 2035.⁶⁶ The plan provides a good overview of the critical technologies the CCP is focusing on, such as artificial intelligence, biotechnology, blockchain, neuroscience, quantum computing, and robotics.⁶⁷

The PRC government has also adopted a \$1.6 trillion infrastructure initiative that surges funding and focus on seven main technology areas, including 5G communication networks, charging equipment for electrified vehicles, data centers, artificial intelligence, and the development of an industrial internet for connected factories.⁶⁸

Finally, a third CCP plan, called China Standards 2035, is an ambitious 15-year blueprint to shape the global standards for the next generation of technologies such as the Internet of Things, cloud computing, big data, 5G, and artificial intelligence.⁶⁹

All of these technologies are shaping a global race for who will lead the information age in the future—authoritarians such as China and Russia or the democracies found in the West and the Indo-Pacific. CCP leadership, including Xi Jinping, sees information technology as a Fourth Industrial Revolution in which heated competition will determine who leads into the future. Xi has said that “a new round of technological revolution and industrial change—artificial intelligence, big data, quantum information, and biotechnology—are gathering strength.” Xi indicated that these “earth-shaking changes” would provide an “important opportunity to promote leapfrog development,” whereby China could assume a dominant position globally, replacing the United States.⁷⁰

The Chinese government regularly reports on national expenditures of R&D funding in science and technology, primarily through the NBS, Ministry of Science and Technology, Ministry of Commerce, Ministry of Industry and Information Technology, and Ministry of Education.

Like most of the official figures proffered publicly by the PRC, these statistics do not tell the whole story. Official government statistics merely show how much the central Chinese government ministries spend—or at least as much as they are willing to acknowledge spending. The statistics do not include how much has been allocated in these areas by the individual provinces, prefectures, or districts. Further, CCP-sanctioned data does not include a clear breakout of PRC investments in the major public/private funds that steer technology research, development, and commercialization, such as Chinese Government Guidance Funds.⁷¹

Further, much of the R&D—as well as the state-sponsored cyber and human-enabled espionage campaign to acquire technology—is not easily identifiable and is likely contained in a “black” or classified budget inaccessible in public data.

As China has, in the past 15 years, entered the international stage as a global technology leader with its “national champions,” such as Huawei, Alibaba, and Tencent, international global attention has expanded beyond the PRC's government-sponsored technology funding. Growing attention has been paid to private Chinese companies (such as those listed above) that engage in R&D—but which the PRC government can access.

To supplement incomplete official reporting, prominent think tanks around the world have created research projects dedicated to tracking this public and private funding. These include:

- Georgetown University Center for Security and Emerging Technology;⁷²
- Brookings Global China Project;⁷³
- Stanford–New America DigiChina Project;⁷⁴
- McKinsey Global Institute;⁷⁵
- Australian Strategic Policy Institute International Cyber Policy Centre;⁷⁶ and

- Centre for International Governance Innovation.⁷⁷

Assessment

There are severe gaps in the data provided by the Chinese government regarding technology. On one hand, the Chinese government's research activities are not that secretive. It publishes information about major R&D projects hosted at State Key Laboratories and supported by the National Natural Science Foundation of China (NSFC). Chinese scientific literature and patent information is generally available, which furthers the PRC's interest in establishing China as a leader in technology.

Nonetheless, because they do not need to attract private sector sponsors, China's state-backed research institutions generally do not publish as much information about their activities as those in more democratic countries. Moreover, many projects financed by the NSFC in 2020 were not disclosed publicly, and little, if anything, is known about them.

On the other hand, technology transfer is not transparent. The Chinese state leans on predatory investment practices and clandestine intelligence-gathering operations to monitor and absorb foreign breakthroughs in science and technology. The Chinese government was previously more transparent about its talent programs, but has regressed considerably.

The PRC is somewhat transparent about its budgeting and expenditure. Most local government and CCP offices (at the provincial level and below) publish information about their annual budgets and expense reports. Yet this is changing with time, as Chinese internet companies have begun to block foreign access to such information. The PRC does not publish any information about the budgets of central-level CCP offices, and little is known about the central CCP committee budget.

Private efforts have been instrumental in improving overall transparency regarding technology. Through painstaking work, these efforts have

pieced together some surviving information about major talent programs over the past decade. But more recent major plans, including the National High-End Foreign Expert Recruitment Plan,⁷⁸ are still largely opaque. No information is being published about award winners. Private efforts to compile information about China's science- and technology-gathering operations have been met with some success in recent years. Private efforts to compile and analyze public budget documents have shed more light on the Chinese government's priorities. Transparency about the Chinese government's surveillance technology deployment has also improved as a result of private efforts.

By far the biggest challenge in understanding China's technological development plans is the lack of detailed visibility into the PRC's largest budget items—its defense and state security spending. While some U.S.-based and international think tanks do a decent job of estimating how much the CCP allocates to its military, intelligence and vast domestic security services based on output and the broad figures released, it is difficult if not impossible for an open-source estimate of how much of what is spent is unseen—namely R&D for advanced technologies. Clearly, many AI, robotics, information technology, quantum computing, autonomous vehicles, and other technologies have military, police, and intelligence applications. Resources are clearly being poured into developing these technologies from the PRC's "black" budget in addition to what is being published in its open-source reporting. Just how much is unclear and very difficult to ascertain.

Further, the PRC has clearly maintained an intense focus on developing domestic technologies to track, surveil, and suppress its own population, such as the social credit score, mass surveillance, facial recognition, and the Great Firewall of China, among other tools. The R&D of most of these technologies would have been perfected as part of the unseen budget of the Ministry of State Security.

Economy

Defining Economy

Studying the economy of 1.4 billion individuals in China is a colossal task and forces many to default to broad, macro-level data and trends. One common method is to look at the components of China's gross domestic product (GDP). This includes the total of consumption, investment, government spending, and net exports within China.

There are two problems with measuring China's GDP, however. The first problem is one that every country has: GDP is an imperfect model that fails to fully reflect the welfare of a country. China may have one of the world's largest GDPs, but its GDP per capita (or GDP per person) is one-fifth the size of those in the world's most advanced economies. Achieving a better assessment of the welfare of China's economy requires more inputs than GDP.

The second problem is that GDP is based on corruptible statistics. Chinese government officials, both at the provincial level and at the national level, can—and often do—falsify numbers. Indeed, the central government admits this happens at the provincial level, and central government data is often met with skepticism by the international community. Even when falsification is not apparent, government actions such as increasing investment and government spending can

artificially prop up GDP growth, even when components like consumption are decreasing, which often reflects a struggling economy.

Why Transparency on China's Economy Is Important

China's economic development has been impressive since it began opening more to the world in the late 1970s and allowing more market forces into its state-directed economic model. Entry into the World Trade Organization in the early 2000s further opened China's market to foreign trade and investment, helping to lift millions out of abject poverty and giving more Chinese access to a better quality of life and leisure. However, Beijing never completely abandoned its socialist ideology. Starting with the global financial crisis in 2008, the Chinese government has gradually shifted back toward a more authoritarian economic model. This shift has accelerated under the leadership of General Secretary Xi Jinping.

The Chinese Communist Party has long taken credit for China's economic success and wishes to keep it that way. This has historically meant that Beijing was more willing to invest resources (efficiently or not) to secure China's economy from disruptions, whether to production, employment, or GDP. For example, the issuing of loans by local

and national governments to sustain economic growth has increased the ratio of local government debt to GDP by over 30 percentage points since 2008.⁷⁹ Some local governments have managed this better than others, but the increasing levels of debt have raised questions about the future of China's economic development.

Decades of other authoritarian policies like migratory worker restrictions and efforts to control population growth have also led to significant imbalances within China, including imbalances in the ratio of men to women and an exacerbated wealth gap between eastern and western provinces. China currently has a population of 1.4 billion, but only 800 million (58 percent) are considered economically active.

In 2022, China experienced its first year of negative population growth since 1961, when Mao Zedong's disastrous "Great Leap Forward" caused mass starvation and famine.⁸⁰ China's working-age population is shrinking, and the dependency ratio (the number of elderly people supported by each 100 workers) is projected to increase from nearly 21 elderly people per 100 workers in 2021 to over 50 per 100 workers in 2050—and possibly more than 75 per 100 workers by 2055.⁸¹ Coupled with rising debt levels, China's economy is well on track to become old before it becomes rich.

An accurate assessment of the health of China's economy is important for a number of reasons. The first is that most public policy analysts are not economists. Many simply default to the fact that China's economy is the second-largest in the world when measured in U.S. dollars, or first when measured by purchasing power parity. This ignores many of the problems China faces as an increasingly closed socialist economy. China's economy is large, but it is riddled with problems.

Understanding the strengths and weaknesses of China's economy will give analysts a better picture of the world's second-largest economy. It will also help researchers and policymakers understand the factors driving Beijing's economic policymaking. The steady decline in China's economic growth since Xi Jinping came to power is partly by design. Xi has prioritized addressing risks inherent in China's economic model. The resulting "structural reforms" and regulatory campaigns have placed downward pressure on the economy but have not

resulted in increased transparency or liberalization—quite the opposite.

Finally, it is important to understand how China's economy works differently from the economies of the U.S. or other countries. It is not just that economic choices in China differ from those in America; it is also important to understand that China's economy is far more susceptible to political interference than the U.S. and other free market economies are. State-owned enterprises, and even ostensibly private companies, are either under the direct influence of, or ultimately answerable to, the CCP.⁸²

Official Data from China

Official data released by the Chinese government are plentiful but not always reliable. Perhaps to create the illusion of transparency, Beijing publishes a significant amount of information on China's economy through its National Bureau of Statistics (NBS), but more data does not guarantee quality data.

Many kinds of economic data can be found through the NBS: information on China's GDP, population size, and wage and income rates; its travel, retail, and education industries; and more. Provincial government data will feed into the information collected by the NBS. Government agencies will also publish more in-depth information on industries they cover like trade or the digital economy, but much of that topline information ends up being published by the NBS too. While some of the data that the NBS publishes may be more reliable—trade statistics, for example, because they can be compared to other countries' statistics—others are questionable. However, even here there are growing discrepancies between the trade data reported by China and that of its trading partners.⁸³

For years, economists have questioned the reliability of China's official GDP statistics and their components. Since the early 1990s, the growth of China's GDP became suspiciously less volatile. Government officials developed a knack for predicting the growth rate for the entire country before the year was even over, even though gaps would become evident between what the provincial governments were reporting and what was announced at the national level.

Components of GDP, like statistics on retail (a feature of consumption) or investment, are sometimes readjusted for Beijing's benefit. Adjustments are not uncommon in most countries, but the size of the adjustments in China's official statistics is unusual. For example, Beijing revised its 2019 statistics on investment down by several hundred billion dollars. Some scholars speculated this was to make the decline in investment in 2020 appear to be less influenced by the global recession.⁸⁴

Beijing has both a political and an economic incentive to make GDP and other statistics appear better than they are. A stable or growing GDP allows Beijing to signal to the world and its citizens that its economic model is succeeding. Strong growth rates in areas like retail or investment can send signals to potential foreign investors that China is still a profitable market for investment when areas like household consumption may be stagnating.

Perhaps just as worrisome as Beijing's reporting of corrupt statistics is a broader lack of reliable information. For example, some of China's state-owned and state-invested enterprises are among the largest companies in the world, measured by total assets or by total employment. Even more state-owned and state-invested companies of smaller size exist throughout China. There is very little transparency with respect to how these organizations are financed and operated, creating questions and uncertainty about China's financial stability, its ability to service debt, and its overall economic productivity.

Private Efforts

Collecting data on any economy can be troublesome for a myriad of reasons. There are other important indicators to consider beyond the key components of GDP: consumption, investment, government spending, and net exports. These include interest rates, productivity, health and education, demographics, investment flows, and defense spending. The lack of transparency, the unreliability of government data, China's size, and the difficulty of gathering information make analyzing the health of the economy extremely difficult.

Even when a significant amount of economic data is available, economists are notorious for

debating which statistics are most important and how to measure them correctly. Derek Scissors of the American Enterprise Institute believes that with China, the most valuable indicators are those that are worst-measured, such as unemployment, debt, and national wealth.⁸⁵ Some of the least important, including stock prices or money supply, are better tracked.

Companies and individuals invested in China or interested in learning more about China's economy can purchase data and analysis from private firms collecting economic data in China, such as China Beige Book,⁸⁶ but there is far less open-source information that is comprehensive and publicly available. The following list represents a few examples of the open-source resources that are available.

- **International Monetary Fund (IMF).** The IMF is an important resource in analyzing China's economy. The IMF regularly monitors the economic and financial policies of its members, including China. This involves sending economists to China to consult with government, business representatives, labor unions, and civil society in what is commonly known as its Article IV consultations.⁸⁷ These consultations are generally published on a regular basis, usually annually.

In addition to government data, the reports include assessments by the IMF staff. Because of the IMF's mission, these reports tend to have a focus on fiscal and monetary policies. They also provide helpful analysis of China's foreign exchange reserves and the relative strength of China's currency. Over the years, there has been particular interest in the strength of the *renminbi*, especially relative to the U.S. dollar. The IMF also provides forecasts for China's future GDP.

- **MacroPolo: "China's Debt Hangover."** MacroPolo is the in-house think tank of the Paulson Institute. Its "China Debt Hangover"⁸⁸ is an interactive map that looks at debt within China's 31 regions and provinces. The indicator measures the extent to which local government financing debt is affecting real economic output across all provinces and regions. Specifically, it looks

at the ratio of debt through local government financing vehicles to GDP (debt-to-GDP ratio). The dataset currently covers the years 2009 to 2021. The level of China's debt and China's ability to service that debt are important questions. A high amount of debt for any country can be a particular burden on its finances and slow growth. MacroPolo also has digital projects on China's high-speed rail and value in global supply chains and provides a quarterly outlook on the health of China's economy.

- **Milken Institute: “Best-Performing Cities China.”** China has some of the largest cities in the world. Shanghai, for example, has a population of more than 25 million and a local GDP of roughly \$500 billion. The Milken Institute's “Best-Performing Cities China” series,⁸⁹ which includes an interactive map, began in 2015 and tracks the economic performance of “34 first- and second-tier cities” from Beijing to Zhengzhou and “228 third-tier cities.” There are nine indicators: two measures each of job, wage, and GDP per capita growth; foreign direct investment (FDI) growth; FDI-to-GDP ratio; and high value-added industry employment. The best-performing cities are then ranked as to whether they are first-tier, second-tier, or third-tier cities. The difference between city tiers generally depends on the size of the cities, with first-tier cities being the largest.
- **Mercator Institute for China Studies: “Trade and Investment.”** Based in Europe, the Mercator Institute for China Studies (MERICS), provides reports analyzing China's trade and investment statistics.⁹⁰ MERICS also covers other topics such as China's digital economy, industrial policy, and outbound foreign direct investments.
- **Caixin Global: Purchasing Managers' Index.** Caixin, partnered with IHS Market, releases monthly indexes that gauge the economic activity of China's manufacturing and services sectors.⁹¹ Based on surveys sent to 500 manufacturing companies and 400 companies that provide services, Caixin's monthly manufacturing and services Purchasing Manager's Index (PMI) shows whether economic activity in these two sectors

is generally expanding or contracting compared to the preceding month. While these surveys are not necessarily useful when comparing data year over year, they do give analysts a sense of the health of China's economy from month to month. A PMI score higher than 50 points indicates an expansion of activity, and a score lower than 50 points indicates a contraction.

- **Individual Reports and Papers.** Much of the economics profession is built on data analysis published as reports, as peer-reviewed articles, and in scholarly journals. These can provide much deeper insight into available data. For example, Zoe Zongyuan Liu⁹² has written extensively on problems related to China's economy, effects of demographic decline, and China's global financial ambitions, among other topics. In June 2023, Liu published her book, *Sovereign Funds: How the Communist Party of China Finances Its Global Ambitions*, providing in-depth analysis on China's sovereign funds and their role in advancing Chinese national interests.⁹³ Tianlei Huang at the Peterson Institute for International Economics has done work that explores the survival of non-profitable firms in China, sometimes referred to as zombie firms.⁹⁴ In *The China Economic Risk Matrix*, Lauren Gloudeman of the Eurasia Group and Logan Wright and Daniel Rosen of the Rhodium Group look at five indicators (property, banks, debt or credit, external pressure, and capital account liberalization) to assess the likelihood of a financial crisis.⁹⁵ A paper published by the National Bureau of Economic Research in 2019 suggests that Chinese officials have been overstating GDP numbers for the past decade. Specifically, China's National Bureau of Statistics has been overestimating national investment, thereby inflating GDP growth statistics.⁹⁶

Assessment

Official Chinese data show China's economy facing considerable headwinds, however China's official data still has significant gaps. While China is relatively transparent with macro-level data on consumption, wages, and employment, there is a lack of reliable information on the nature of

the Chinese Communist Party's (CCP's) control over Chinese state-owned enterprises (SOEs) and businesses. Official data from SOEs lack basic firm-level statistics common in other countries.

When it comes to debt and government spending, the central government seems more transparent than local governments. Local debt is more complicated, and much of it is off-budget. There also is a severe lack of reliable data from the Chinese government on subsidies and gross domestic product. In response to pressure from the U.S., Chinese authorities have begun to draft a framework for allowing full access to auditing reports of select Chinese companies listed in the New York Stock Exchange.⁹⁷ This negotiation between U.S. and Chinese officials remains unresolved with a pending 2024 deadline.⁹⁸

Private efforts have helped fill some of the gaps in data, especially in shedding light on the nature of the CCP's control over Chinese SOEs and businesses. There have been improvements in the collection and dissemination of data on corporate portfolios and the impact of government policies. Private efforts have also significantly improved transparency of the Chinese government's subsidies and China's GDP. Nevertheless, major gaps remain in trying to ascertain Chinese government spending and debt levels.

Trends from 2023

After recording its worst economic performance in decades in 2020 due to the COVID-19 outbreak, which brought the global economy to a near standstill, the Chinese economy seemingly bounced back in 2021, exceeding expectations. This was largely due to surging demand for Chinese manufacturing amid pandemic-related disruptions in other countries.

This resurgence was short-lived, however. China's economic growth, which had already slowed in the years leading up to the pandemic, started to collapse in 2022, as Beijing remained stubbornly insistent on a zero-COVID policy that was unsuited to deal with the highly contagious Omicron variant. Outbreaks throughout China were met with strict lockdowns, at one point affecting cities responsible for 40 percent of China's economic output.⁹⁹ The government only reported 3 percent economic growth for the year (down from

8.4 percent the previous year), though this figure is almost certainly an overstatement.¹⁰⁰

Even after China abruptly abandoned the zero-COVID policy in December 2022, its economy struggled to pick up steam. A year on, the anticipated post-zero-COVID boom has yet to materialize. Signs that Beijing was not confident in its ability to turn the economy around emerged at the annual Two Sessions meetings in March 2023, when the Chinese government set a growth target for only "around 5 [percent]."¹⁰¹ Such a low growth target coming off the low baseline left by a year of extreme economic disruption reflected both the seriousness of the challenges facing China's economy and the government's continued willingness to prioritize "structural reforms" (including consolidating the CCP's control over economic activity and cracking down on excessive expansion of capital) over short-term quantitative growth.¹⁰²

The CCP regime now faces the stiffest economic headwinds since it began implementing its "reform and opening" policy in the late 1970s. A simmering real estate crisis and a youth unemployment rate that has risen to such heights that the government stopped releasing official figures have exacerbated already unprecedented economic challenges.¹⁰³ The resulting erosion of public confidence in 2023 led consumers to save, rather than spend, their money, further dampening the country's economic outlook.

At the end of 2023, there are indications that China's economy might be slowly starting to recover. Recent trends show a small but noticeable uptick in both consumption and industrial activity, while the 4.9 percent growth rate for the third quarter exceeded expectations.¹⁰⁴ After two quarters of solid growth, most projections now expect China to hit its target of roughly 5 percent growth—and possibly even exceed it.¹⁰⁵

Nevertheless, challenges will continue to plague China's economic policymakers for the foreseeable future. The astronomical youth unemployment will be a long-term problem that cannot be resolved overnight. At the same time, crackdowns on corruption and regulatory noncompliance, while necessary, will continue to proceed with little regard for their impact on economic activity and their chilling effect on investor appetite. Diplomatic tensions with the U.S. and other leading

economies will result in decreased foreign investment and stricter restrictions against exporting goods that are critical to key growth sectors, such as technology. Chinese technology companies are already reeling from the export controls the U.S. put in place in October 2022.

Perhaps the greatest headwind that will continue to challenge China's economy for years to come is Beijing's emphasis on restructuring its economic model to focus on what the CCP leadership deem to be "high-quality"—as opposed to fast-paced—growth. While some of these efforts serve only to tighten the CCP's control over the economy, many of them deal with serious issues that have long needed to be addressed, such as sky-high local government debt and uneven development that left interior regions behind. Attempts to address these issues are likely to be disruptive in the short- to medium-term. Going forward, what is certain is that there is no return to the rapid economic growth that persisted prior to 2012.

Opportunities for Further Research

Chinese government data are notoriously unreliable, and this provides both an imperative and an opportunity for researchers to conduct more objective analyses that shine a light on the true role and state of China's economy.

Many analysts try to compare the health of China's economy with that of the U.S. or other economies, but this is akin to comparing apples and oranges. China's economy is at a different stage of development than the U.S. and other advanced economies. American and Chinese consumption patterns are also different. Efforts to compare the U.S. and Chinese economies, such as adjusting GDP for purchasing power parity, expose flaws in the methods economists use more than they give any sense of the relative size of China's economy.

Those who are trying to gain a better understanding of the health of China's economy would benefit from looking at the progress—or lack of progress—that China has made throughout its history. Another area of research area that could have a significant impact in analyzing the health of China's economy is researching how efficient China's economy actually is in total factor productivity. China has an abundance of labor and capital, but the degree to which they are being deployed efficiently is an open question.

Other opportunities for research include the following:

- How did China's zero-COVID policy affect small to medium-sized businesses and impact income inequality?
- How has China's labor market developed under reforms prioritizing advanced technology?
- What percentage of China's manufacturing exports are produced by Chinese versus foreign companies, and how has this trend changed over time?
- How does Xi Jinping's renewed emphasis on "common prosperity" translate into policy, and what impact does this have on China's economic growth, both as a whole and across geographic regions and economic sectors?

There is still much to be learned about the true state of China's economy, not just how it has developed, but how it continues to develop as the world recovers from the COVID-19 pandemic and becomes increasingly digital and automated. As China becomes less forthcoming with its data, it is up to economics scholars to provide greater transparency into China's economy.

Energy and Environment

Defining Energy and Environment

This chapter offers a snapshot of China's energy and environmental data. Although each area is independent, there is interplay between energy and environmental issues. Energy production and use can have both positive and negative effects on environmental quality, and environmental policy can both positively and negatively affect access to energy resources.

Categories of energy data include energy production by source, end use by sector, and imports and exports. They also encompass energy economic benchmarks, such as energy infrastructure investment, energy poverty, and energy consumption per dollar of gross domestic product (GDP). Reliable trend data can help evaluate how China's energy mix is changing or (perhaps equally important) not changing, and how these data reflect environmental priorities.

Environmental data survey a wide range of environmental stewardship and human health categories, including the extent to which pollution directly affects human health and the environment. Categories include:

- Air quality, which is generally assessed by measurements of particulate matter, sulfur dioxide, nitrous oxides, carbon monoxide, and ground-level ozone;
- Indoor air quality, which is a more difficult measure because households are affected by the sources of the fuel they use for cooking and heat;
- Water quality and water pollution;
- Stewardship of water resources and industries, such as commercial fishing;
- Land and soil pollution, which involve tracking pesticide use, mining runoff and chemicals, and other contaminants that leach into the soil as a consequence of human activities; and
- Greenhouse gas emissions trends.

Why Transparency on China's Energy and Environment Is Important

China's commitment to transparent and reliable data is important chiefly for the Chinese people, who must live with the consequences of their government's energy and environmental policy, and also of interest internationally given China's status as the world's largest polluter. Energy use and a healthy environment strike close to home because they are the core building blocks of well-being. Affordable, reliable energy is a

necessity for families, but so too is a clean environment. China's pollution is directly responsible for a number of serious public health problems, declines in worker productivity, migration patterns, and harm to people's well-being.¹⁰⁶ Clear, objective data can identify where problems exist, incentivize data-driven solutions, and empower people to live healthier and more prosperous lives.

Accurate data will also help to measure the impact of policy decisions on energy use and environmental protection. Such data provide more concrete and defensible evidence as to which policy choices and government structures best provide energy access and environmental well-being. Free economies are generally cleaner economies,¹⁰⁷ not only because these societies possess greater wealth to improve their environments, but also because the tools of stewardship—property rights, rule of law, transparency and accountability, and incentive to innovate and become more efficient—are inherent characteristics of free economies. Unfree economies, such as China's,¹⁰⁸ put those tools and accountability for them largely in the hands of government.

Chinese energy and environmental data also have international implications. China's economy has a global reach, and its energy market ambitions and environmental practices affect, for better or worse, its neighbors,¹⁰⁹ its trading partners,¹¹⁰ and the global commons.¹¹¹ Data are useful benchmarks for discerning the health of China's economy, its progress as a developing and developed nation, and its trustworthiness in upholding its international commitments. For example, China is a rising manufacturer and exporter of nuclear power, and its government and companies will play a critical role in influencing peaceful uses of nuclear power and exporting both safety and international non-proliferation practices and norms.

In addition, because China is a party to a number of international environmental agreements with major economic implications, such as the Paris Agreement, Kyoto Protocol, and Montreal Protocol, reliable data are necessary to ensure that China is meeting its obligations and commitments. Such data are similarly useful in formulating U.S. policy responses to China in these international arrangements and markets.

Official Data from China

After decades of fraudulent, inconsistent, nonexistent, or undisclosed national data and anecdotal evidence of poor environmental stewardship, the Chinese government does not have a reputation for reporting energy and environmental data consistently or accurately. It has been caught withholding or misrepresenting data on multiple occasions by its own citizens,¹¹² nongovernmental organizations (NGOs),¹¹³ and U.S. government resources.¹¹⁴ In recent years, however, outside pressure, whether from the Chinese people or from other countries, has helped to create accountability and drive change by the government—for example, with respect to monitoring and publishing data on air quality.

In the past, the Chinese government has treated some energy and environmental data as state secrets, but in other cases, the absence of consistent data is due to the sheer complexity and magnitude of data collection across China's provinces. For example, a joint project between the Chinese Center for Disease Control and Prevention and the U.S. National Institute of Environmental Health to build a Chinese Environmental Public Health Tracking system has been complicated by the difficulty of “collecting, integrating, analyzing, and interpreting environmental and health data at various administrative levels ranging from provinces and cities to counties and villages.”¹¹⁵ This is important because environmental policies in one city or province affect economic decisions and environmental outcomes in others. The ability to aggregate these data is essential if one is to understand the magnitude of China's environmental challenges.

In June 2020, China released the “Bulletin on the Second National Census on Pollution Sources” with the results of a three-year effort undertaken by 15 ministerial departments. China releases the census every decade, and the data include “more than 1,800 database tables” with “over 150 million items of basic data.”¹¹⁶ If these data are objective, accurate, and publicly available, this could be a significant step forward for the country's environmental reporting.

Compounding the difficulty of accessing accurate data, data manipulation has occurred closer to the source at the local level of governments in some cases.¹¹⁷ The Ministry of Ecology and

Environment was created in 2018 to consolidate and standardize environmental data from the former Ministry of Environmental Protection and six other central government bodies.¹¹⁸

Air Pollution and Air Quality. Air pollution, mainly in China’s northern regions, has long been a source of discontent among the public due to its to its detrimental effects on public health. For this reason, the Chinese government historically tightly controlled air quality data. This started to change, however, in 2013, and especially since Beijing declared a “war against pollution” in 2014.¹¹⁹ Today, real-time information on and monitoring of national, provincial, and municipal levels of particulate matter, sulfur dioxide, nitrous oxides, carbon monoxide, and ozone is readily available via the internet and mobile apps, and the government goes out of its way to warn the public of air quality emergencies and punish any local officials who tamper with monitoring equipment or data.¹²⁰

Today, air quality is one of the areas in which the Chinese government is the most transparent toward both the Chinese public and outside observers. Sources of information on air pollution and air quality in China include the Ministry of Ecology and Environment’s annual *Report on the State of the Ecology and Environment in China*,¹²¹ and the National Bureau of Statistics of China’s *China Statistical Yearbook*.¹²²

Water Quality. Data on water quality is notoriously difficult to capture, and “multiple ministries have overlapping responsibilities in a system that is not conducive to effective groundwater monitoring and management. Insufficient coordination between provincial and national departments that monitor water quality creates discrepancies in data.”¹²³ The former Ministry of Environmental Protection published weekly, monthly, and annual reports on the quality of surface water, but information on the quality of drinking water is not available to the public.¹²⁴ The government’s “Black and Smelly Waters” reporting program allows individuals to report local water pollution.¹²⁵

Sources of information on water quality in China include the Ministry of Ecology and Environment’s annual *Report on the State of the Ecology and Environment in China*,¹²⁶ and the National Bureau of Statistics of China’s *China Statistical Yearbook*.¹²⁷

Climate. Data on climate are reported largely by the China Meteorological Administration (CMA) and centers within the CMA. As China’s national weather service, the CMA makes near-term weather forecasts and collects and publishes data on surface, upper air, meteorological, and satellite observations. The CMA opened this information to the public for free in 2015.¹²⁸ The CMA, along with the Ministry of Science and Technology and other government agencies, have published national climate assessment reports in 2007, 2011, and 2015. The integrity of those reports has not been called into question, but outside academics have commented on data gaps that limit effective policymaking.¹²⁹ Despite a launch event for The Fourth National Climate Change Assessment Report—Hong Kong and Macao Special Report, the event focused on gathering “ideas and [making] the report drafting and editing work solid”—with no public announcement of a finalized report.¹³⁰

The primary hub of climate research within the CMA is the National Climate Center. In July 2023, the Climate Center published its *Blue Book on Climate Change*, which analyzes a number of climate-related trends both globally and specific to China.¹³¹ In the past, China has also underreported its coal consumption in its *Energy Statistical Yearbook*, which consequently underreports carbon dioxide emissions.¹³²

The lack of any official and consistent data reporting is important in the context of China’s commitment, pursuant to the Paris Climate Agreement, that its emissions would peak by 2030. Inaccuracies, data gaps, and uncertainties in reporting on emissions make it difficult to enforce accountability.

Energy. In the past, data on energy in China has lacked reliability because of frequent, unexplained, and significant revisions.¹³³ The National Bureau of Statistics’ *China Statistical Yearbook* includes data on mineral reserves, energy production and consumption by sector, total imports and exports, and energy intensity by GDP. The International Energy Agency notes that the National Bureau of Statistics’ “revisions showed significant changes both on the supply and demand side for a number of energy products, resulting in breaks in time series between 1999 and 2000. Most importantly, the previously significant statistical difference for coal

was allocated to industrial consumption based on findings from a national economic census.¹³⁴ The Ministry of Natural Resources also reports data on land use and marine and mineral resources.

Sources of information on energy in China include:

- the National Bureau of Statistics of China's *China Statistical Yearbook*,¹³⁵
- the Ministry of Natural Resources Natural Resources Bulletins,¹³⁶
- the China Electricity Council,¹³⁷ and
- the National Nuclear Safety Administration's *Annual Report*.¹³⁸

Private Efforts

Citizen, NGO, and outside government sources of data and information on energy and environmental issues in China have been critical to exposing significant discrepancies between government data and actual conditions. Pressure from the bottom up and from the outside in has sometimes catalyzed reform and improved government transparency. Two examples show how this has worked.

- **Pressure from the bottom up.** In 2006, after years of reporting on environmental problems, Ma Jun founded the Institute for Public and Environmental Affairs (IPE) to collect and compile usable "environmental quality, emissions and pollution source supervision records published by the local governments of 31 provinces and 337 cities, as well as information mandatorily or voluntarily disclosed by enterprises based on relevant legislation and corporate social responsibility requirements."¹³⁹ IPE data and maps are now available as resources for individuals and foreign companies looking to do business in China.¹⁴⁰
- **Pressure from the outside in.** In 2008, the U.S. embassy in Beijing installed air quality monitors on site to track particulate matter (PM2.5) and better inform U.S. citizens about pollution levels.¹⁴¹ Embassy data, which repeatedly

differed from Chinese government air quality notifications that downplayed levels of pollution, were made widely available through social media. Though the Chinese government initially tried to force the Embassy to stop publishing the data, international exposure and public outcry eventually forced the Chinese government to build out its air quality monitoring, reporting, and regulatory network in 2013.

Independent data from external sources has also shed light on Chinese investment and patterns in global energy markets. For example, the Mercator Institute for China Studies, which maintains a database of spending on Belt and Road Initiative (BRI) projects, estimates that "about two thirds of Chinese spending on completed BRI projects went into the energy sector, and already amounts to more than 50 billion USD."¹⁴²

Given the lack of scope and resources, it is extremely difficult for independent data to capture a full picture of energy and environment realities in China. For example, Yale, Columbia University, the Chinese Academy for Environmental Planning, and the City University of Hong Kong attempted to develop an environmental assessment of each of China's provinces but "concluded that data gaps, a lack of transparency, and inconsistencies in China's baseline official data were too prevalent to allow for the construction of a consistent and comparable provincial China Environmental Performance Index."¹⁴³

Nevertheless, independent efforts to generate and organize data have proved to be and will continue to be critical to achieving more accurate and transparent access to information in China. The following are a few examples of these open-source resources.

- **Yale Center for Environmental Law and Policy: *Environmental Performance Index*.** Compiled by the Yale Center for Environmental Law and Policy and the Center for International Earth Science Information Network of Columbia University's Earth Institute since 2006 with data going back to 1994, the Environmental Performance Index (EPI) uses "40 performance indicators across 11 issue categories [to rank] 180 countries on

environmental health and ecosystem vitality.”¹⁴⁴ The EPI uses a variety of government and independent sources of data, including NASA satellite data.¹⁴⁵

- **Boston University, Global Development Policy Center: China’s Global Energy Finance Database.** The China’s Global Energy Finance database¹⁴⁶ is an interactive data project by Boston University’s Global Development Policy Center (GDPC) that analyzes financing for global energy projects by China’s two global policy banks: the China Development Bank (CDB) and the Export–Import Bank of China (EX–IM Bank). The project notes that these two policy banks have provided \$234.6 billion in energy finance since 2000, including \$1.76 billion in 2020. The interactive map published on the website organizes Chinese spending by region; energy source type (coal, gas, hydropower, etc.); energy subsector (power generation, extraction, transmission, etc.); and lender (CDB, EX–IM Bank, and jointly financed projects). It also offers individual datasets for each year from 2000 to 2020. The data are collected from the “official websites at the [Chinese] banks themselves or host country ministries, news reports, and official documents” that are later “verified through interview contacts in China and other host countries, when possible. Every record includes the year, location, energy source, subsector, lender, and project description.”¹⁴⁷
- **Boston University, Global Development Policy Center: China’s Global Power Database.** Boston University’s GDPC also publishes the China’s Global Power Database,¹⁴⁸ an interactive data project that tracks all power plants financed by the China Development Bank and the Export–Import Bank of China worldwide, as well as other forms of Chinese foreign direct investment, including mergers and acquisitions, debt finance, and greenfield investments. As of mid-2022, the database was tracking “648 power plants overseas, representing 1,423 individual power generating units providing a total of 171.6 [gigawatts] of power generation capacity.”¹⁴⁹ The database displays deal types, the Chinese investor, percentage of ownership, capacity of the project, type of technology, operating status, and estimated CO₂ emissions.
- **Harvard–China Project on Energy, Economy and Environment.** Founded in 1993, the Harvard–China Project “conducts rigorous, peer-reviewed studies with partner institutions in China of the global challenges of climate change, air quality, energy systems, and economic development.”¹⁵⁰ It conducts and compiles field observations, emissions inventories, atmospheric modeling of China, and evaluation of China’s greenhouse gas and pollution-control policies.
- **Global Energy Monitor.** Global Energy Monitor gathers data on fossil fuel use with the intent to inform climate and environmental decisions.¹⁵¹ It maintains global trackers on coal plants, fossil infrastructure, coal mines, steel production plants, and public financing for coal projects. In many cases, these trackers include information on all operating, planned, canceled, and closed facilities. Data come from a variety of government and independent sources.¹⁵²
- **Our World in Data.** A joint project of the Global Change Data Lab and the Oxford Martin Programme on Global Development, Our World in Data includes extensive global and country-level trend data on energy and environmental topics. It also publishes China-specific articles and data in “China: Energy Country Profile” and “China: CO₂ Country Profile.”¹⁵³ Data come from a variety of government and independent sources.¹⁵⁴
- **Energy Institute: *Statistical Review of World Energy*.** Energy Institute publishes annual reports covering energy production, consumption, and emissions by country, region, and sector with data going back to 1965. It uses publicly available government and independent data.¹⁵⁵ The reports were previously published by BP.
- **Climate Watch.** Climate Watch provides country-specific time-series data on greenhouse gas emissions and climate targets.¹⁵⁶

- **Henry L. Stimson Center: Mekong Dam Monitor.** China’s network of dams and reservoirs along the Mekong River affects water resources, environmental stewardship, and agreements with downstream countries Thailand, Laos, Cambodia, and Vietnam. The Stimson Center uses independent “remote sensing, satellite imagery, and geographic information systems (GIS) analysis to provide near-real-time reporting and data downloads across numerous previously unreported indicators in the Mekong Basin.”¹⁵⁷

International Organization Efforts

Although the focus of this report is on privately generated transparency, it is important to note the resources provided by international organizations as they help to fill some of the gaps in the overall data. These organizations include:

- **International Energy Agency.** The International Energy Agency (IEA) compiles data and trends on global, regional, and country-level energy supply, consumption, and emissions. It uses data from the National Bureau of Statistics of China, secondary sources, and estimates to fill in gaps in data going back to 1971.¹⁵⁸ The IEA also has tracked inconsistencies in energy data provided by the National Bureau of Statistics.¹⁵⁹
- **International Atomic Energy Agency.** The International Atomic Energy Agency (IAEA) is the international governing body for nuclear safeguards and nonproliferation under the auspices of the United Nations. It houses a number of nuclear power databases and issues reports on nuclear reactors; uranium resources, production, and demand; and nuclear waste. Among these are the Country Nuclear Power Profiles,¹⁶⁰ *Uranium 2022: Resources, Production and Demand* (the “Red Book”), prepared jointly by the IAEA and the Organisation for Economic Co-operation and Development’s (OECD’s) Nuclear Energy Agency and published by the OECD;¹⁶¹ and *Status and Trends in Spent Fuel and Radioactive Waste Management*.¹⁶²
- **World Health Organization.** The World Health Organization has a household energy database that provides survey data on how people cook,

light, and heat their homes.¹⁶³ It also aggregates data for ambient air quality standards and national air quality data, with China’s data supplied by Beijing’s National Environmental Monitoring Center.¹⁶⁴

Assessment

The Chinese government’s transparency on energy and environment varies depending on the type of data. Whereas they are very transparent when it comes to air quality data, there is near-zero transparency on water and land management, and China’s climate data. What little is provided is often not verifiable or is disputed by external efforts. Energy production data tends to be more available because it is produced by state-owned enterprises that are listed and floated on local Chinese, and sometimes global, stock exchanges.

Private efforts continue to greatly improve transparency on energy and environment. These efforts have been instrumental in filling gaps in data on energy production, climate data, and water and land management. To note, private efforts have not made as much of an impact on air quality because the Chinese government has been reporting indicators for air quality for more than a decade. These indicators provided by the Chinese government match the indicators provided by non-government efforts.

Trends from 2023

In a matter of several decades, China has become a major global energy consumer and producer. China’s total energy consumption has more than tripled since 2000, fueling the country’s rapid economic growth.¹⁶⁵ In 2022, China was the largest global consumer of coal and renewable electricity, the second-largest consumer of oil and nuclear, and the third-largest consumer of natural gas.¹⁶⁶ This rapid expansion in energy demand is expressed in a variety of ways. For example, as noted by Vaclav Smil, car ownership was less than one car per 100 Chinese urban households in 1999. During the next two decades, ownership exploded to 40 cars per hundred households.¹⁶⁷

Such energy consumption trends present a robust but varied picture across China, indicating much more room for consumption growth if allowed by government policies. Though China is

now the world's largest energy consumer, China's energy consumption per capita is far below the OECD average, and consumption is drastically stratified across rural and urban provinces.¹⁶⁸

To meet this demand, China has also become a major energy producer and importer over the last several decades. It is the world's largest producer of coal, hydropower, and renewable electricity.¹⁶⁹ China is one of the world's largest importers of liquified natural gas, falling just behind Japan.¹⁷⁰ China accounted for the one of the greatest shares of global growth in coal production, installed wind and solar capacity, and nuclear power generation. China's oil production grew from 199 tons in 2021 to 205 tons in 2022, despite remaining the world's largest oil importer.¹⁷¹ In 2022, China's refinery capacity overtook the United States, making it the world's largest refiner, though its fuel products production remains behind the United States.¹⁷² Natural gas production and imports continued a long trend of increasing in 2022.

Taken together, the scale of Chinese energy demand and production influences global energy markets. This has been particularly noticeable in global recovery from responses to the COVID-19 pandemic and in market shifts created by Russia's invasion of Ukraine. In the case of the former, China was one of only a few countries to see total energy consumption increase during 2020, with increases in particular of coal, oil, and natural gas, even as most countries experienced historic reductions in consumption and/or production.¹⁷³ However, ineffective central planning to curb consumption led to a mismatch in Chinese coal production and prices in the fall of 2021 that resulted in grid failures and contributed to higher Chinese demand for natural gas with consequent higher global prices.¹⁷⁴ Conversely, renewed travel restrictions by the Chinese government in response to COVID variants and fears of economic recession have decreased Chinese demand for oil, with the consequence of moderating global prices.¹⁷⁵

China's zero-COVID policies seem to have slowed primary energy use. Instead of growing at a yearly rate near 3 percent, primary energy use and primary energy use per capita growth failed to eclipse 1 percent during 2022.¹⁷⁶ In fact, oil consumption in barrels of oil declined by 4 percent

to below 2019 levels, while its normal trend was to increase by 3.6 percent each year over the past decade.¹⁷⁷ Additionally, the consumption of natural gas declined by 1.2 percent from an average increase of 9.6 percent from the past decade. That may, however, be linked to the record-setting usage of natural gas in 2021 and market competition than from a rapid slowdown.

China's role as a major energy consumer has also influenced and been influenced by changes in global energy markets due to Russia's invasion of Ukraine. The European Union's (EU's) efforts to eliminate Russian natural gas imports have turned the EU from a secondary market to a direct competitor with Asia for natural gas imports. Higher natural gas prices in European markets have diverted U.S. exports away from China through much of 2022.¹⁷⁸ Additionally, Europe is now sourcing natural gas from Azerbaijan, despite the nation's invasion of the Russia-aligned Armenian Republic. Azerbaijan plans to ramp up production from 8 billion to 20 billion cubic meters (bcm) of natural gas by 2027.¹⁷⁹

Because China has not condemned Russia's actions against Ukraine nor condoned sanctions on Russia, it has been a ready market for discounted Russian natural gas and oil that no longer have access to European markets.¹⁸⁰ However, given the pipeline infrastructure to the EU, Russia is dependent on shipping its natural gas overland via the sole Power of Siberia pipeline completed in 2019, which alone is shipping 22 bcm of natural gas per year.¹⁸¹ Power of Siberia will reach its maximum capacity of 38 bcm in 2027. Russia is considering building a Power of Siberia 2 and 3, which will bring another 50 bcm and 10 bcm respectively to China.¹⁸² Russia plans to ship 100 million tons of liquefied natural gas via tankers to China by 2030. (For context, Russia shipped 165 bcm of gas to Europe and Turkey in 2019 and sent 60 bcm in 2022.)¹⁸³

All of this is the appropriate context in which to understand another energy and environmental development in the last year—that of China's climate commitments. In 2021, as part of the 26th United Nations climate change conference in Scotland, China updated its Nationally Determined Contribution for the first time in addition to releasing long-term policy framework plans

(known as “1+N”). China committed to peak its carbon dioxide emissions “before 2030,” reach neutrality in carbon dioxide emissions “before 2060,” and reduce its energy consumption per unit of gross domestic product 65 percent (relative to 2005) by 2030.¹⁸⁴ China also announced in 2021 that it “will not build new coal-fired power projects abroad,” while evading details about this pledge.¹⁸⁵

By 2023, the farce of a pledge had been exposed as General Secretary Xi Jinping vowed to not be constrained by any climate pledges and to set China’s own path and timeline as to when it will phase out hydrocarbons.¹⁸⁶ China already has over 1,100 coal power plants, while America has fewer than 250. Furthermore, while China has increased its coal power generation by almost 600,000 megawatts, America has reduced its coal generation by 100,000 megawatts since 2010.¹⁸⁷ It is no wonder that China, which continues to build two new coal power plants a week, is able to attract manufacturing firms from across the world with its low labor costs and low-cost, unregulated energy.¹⁸⁸

China’s energy trends should inject necessary realism into aspirational international climate agreements. For example, China is able to take advantage of the favorable terms and flexibility granted to developing countries even though it is also the world’s greatest source of greenhouse gas emissions and wields the financial wherewithal of the world’s wealthiest economies.¹⁸⁹ As the Chinese people have experienced increased access to fuel, power, and heat, both standards of living and economic growth have improved dramatically. China will always prioritize its economic growth and energy security, for which climate objectives are either secondary objectives or opportunities for strategic leveraging.

Opportunities for Further Research

China has improved its disclosure of environmental data over the past decade, both in terms of environmental issues covered and in terms of data published. Outside pressure as well as third-party reporting have increased data reporting and availability. However, there are plenty of opportunities to fill gaps in data and to pursue further research.

The first is increased third-party participation. A 2020 article in the *Journal of Environmental Management* found that increased third-party

monitoring improved the data on air quality in China.¹⁹⁰ The authors concluded that the evidence “supports China’s efforts to advance its environmental governance from a mono-centric and non-participatory policy process to one that integrates both authoritarian control and market-based mechanisms.”¹⁹¹ To the extent possible, more third-party monitoring should extend to the other environmental indicators mentioned in this chapter. This is particularly true where the quality of data is poor, as it is with respect to data on indoor air quality, drinking water, surface water, and soil toxicity.¹⁹²

Another opportunity for improvement is better and more consistent information at the local level. For example, Yale’s Data-Driven Solutions Group noted:

[T]he [Ministry of Environmental Protection’s] annual *State of Environment Report* demonstrates the need for improving data quality. The report summarizes key water quality statistics, showing that data from different ministries are often untimely, presented in inaccessible formats (e.g. low resolution images that cannot be downloaded from the web in tabular format), and without information on original data sources or methodologies.¹⁹³

A similar lack of standardization and coordination between local provinces and national agencies exists in the reporting of other environmental data as well, whether it be with respect to fisheries, forests, or other biodiversity metrics.¹⁹⁴ Improved data collection at the provincial level and more uniformity in reporting to make the data accessible and verifiable would do much to improve both accountability for and transparency of environmental data in China.

Another potential avenue for research would be more investigative in nature. China has hidden industrial projects and environmental data under the guise of “state secrets.” Relatedly, companies that do business in China need more and better information into China’s use of forced labor, particularly with critical minerals and renewable energy technology supply chains. A better grasp of this would enhance understanding of the progress,

or lack thereof, in environmental data reporting and environmental progress.

Globally, China manufactures 79 percent of polysilicon, 75 percent of modules, 97 percent of wafers, and 85 percent of solar cells: Xinjiang province produces about 45 percent of the world's polysilicon alone.¹⁹⁵ The Chinese Communist Party has a history of using forced labor from its Uyghur, Kazakh, Kyrgyz, and other minority populations in Xinjiang for the manufacture of these components and for the operation of the coal-fired power plants that support the factories.

The low cost of labor and energy has led to four out of the five largest polysilicon factories being located in Xinjiang.¹⁹⁶ The largest of these companies are: GCL Technology Holdings Limited; TBEA Co. & Xinte Energy Company (subsidiary); Daqo New Energy Corporation; East Hope Group; Xinjiang Western Hoshine Silicon Industry Co., Ltd.; JinkoSolar Holdings Company; and Zhundong Economic and the Technological Development Zone. The Zhundong Economic and the Technological Development Zone is also run by TBEA, formerly Tebian Electric Apparatus. All of these companies produce solar panels, power transformers, and

components using thousands of “surplus workers” from minority communities.¹⁹⁷

Domestically, the Solar Energy Industries Association, an American national association of over 1,000 member companies, has pledged to oppose this use of slave labor in the industry. However, the association's traceability protocol only covers the commodity chain between metallurgical-grade silicon and completed solar photovoltaic (PV) modules, omitting upstream sourcing of quartz rock as well as inputs like aluminum and solar PV cover glass.¹⁹⁸

Federally, the passage of the Uyghur Forced Labor Prevention Act presumes that goods from Xinjiang are made with forced labor and are, therefore, denied entry into the country unless proven otherwise.¹⁹⁹ Under this law, the U.S. Customs and Border Protection has seized and examined over \$1.7 billion worth of shipments, denying \$385 million worth of goods, most of which are solar panels or related components.²⁰⁰ Customs and Border Enforcement find tracing supply chains suspected of forced labor to be daunting, as material importers can port-shop to disguise the material's origins.²⁰¹

Human Rights

Defining Human Rights

The Chinese Communist Party (CCP) has a consistent record of neglecting its duty as a government to protect and preserve the rights of Chinese citizens. In many cases, government officials or policies are directly and wittingly responsible for abuses. This chapter highlights the situations in Xinjiang, Tibet, and Hong Kong, as well as more general threats to internationally recognized rights, such as freedoms of religion, press, and speech in China.

The human rights concerns covered in this chapter are largely encompassed in the United Nations' (U.N.'s) conception of civil and political rights. Broadly defined, they are those rights that derive from the principle that:

[R]ecognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,

[T]hat these rights derive from the inherent dignity of the human person,

[T]hat, in accordance with the Universal Declaration of Human Rights, the ideal of free human beings enjoying civil and

political freedom and freedom from fear and want can only be achieved if conditions are created whereby everyone may enjoy his civil and political rights, as well as his economic, social and cultural rights....²⁰²

In short, the international community recognizes that these rights exist independently of government. They are not granted by governments and therefore cannot be taken away by governments—even if governments fail to respect them. China is a member of the U.N. Human Rights Council and, according to its own Ministry of Foreign Affairs, “ratified or joined 26 international human rights instruments, including 6 core UN human rights treaties.”²⁰³ As such, the CCP cannot plead ignorance of the obligations it has to its citizens.

Nevertheless, data on human rights in China is difficult, if not impossible, to acquire because the CCP does much to withhold, manipulate, and obfuscate critical information on human rights trends. Because of these difficulties, this chapter relies on various forms of data collection, including firsthand accounts from detention survivors as documented by the media, to supplement efforts by government and civil society to promote transparency regarding human rights.

Why Transparency on China's Human Rights Is Important

As Andrew Nathan and Andrew Scobell argue in their book *China's Search for Security*, China's foreign policy is motivated largely by perceived vulnerability to threats.²⁰⁴ China's vulnerabilities include both internal and external threats. The CCP places a particular premium on maintaining its own internal stability and enforcing its sovereignty. The CCP sees regions like Taiwan, Tibet, and Xinjiang as posing threats to internal stability. It also views unrest among the Chinese people themselves as a threat.²⁰⁵ The CCP has responded to these perceived threats by severely restricting the fundamental freedoms—including freedom of speech, the press, religion, and association, and other core human and civil rights—available to Chinese citizens.

While the U.S. government has often viewed issues of human rights in China as peripheral to U.S. core national interests, many of the CCP's abuses relate to issues the party sees as central to the survival of its regime. At best, the U.S. government's decision to de-prioritize human rights concerns in broader engagements with China has led to inconsistencies in U.S. policy—at worst, it has hamstrung U.S. strategy by sidelining a source of substantial leverage over the CCP.

There is an abiding need to promote transparency with respect to the CCP's efforts to curtail human rights. Civil society, including nonprofits, nongovernmental organizations, legal aid organizations, academics, and others, have sought to pull back the veil on the CCP's efforts to undermine freedom and human rights in China, but much work remains to be done.

Official Data from China

The CCP lacks transparency in many areas, but few aspects of its policies are more shrouded in secrecy than those related to human rights. However, while Chinese government data on these issues are often hard to obtain, researchers have found ways to shed light on these trends. In many cases, observers can view early drafts of new laws and regulations in China and even provide feedback during public comment periods.

This is not always the case, however, when the legislation relates to sensitive issues affecting

human rights. The National Security Law imposed on Hong Kong by China's National People's Congress in 2020 is a case in point.²⁰⁶ Even Hong Kong's then-chief executive, Carrie Lam, whose administration enthusiastically promoted the law, admitted days before its imposition on the city by Beijing that she had not seen the law and did not know what was in it.²⁰⁷

In 2018, the CCP instituted new regulations on religious affairs.²⁰⁸ Although the PRC constitution²⁰⁹ claims to guarantee religious liberty and the CCP does not acknowledge that it restricts a person's ability to practice his or her faith, the regulations *do* violate international standards of religious freedom. Regulations like these provide insight into the CCP's policies—and often inadvertently reveal information about human rights conditions inside China. Therefore, they can be useful in gaining an understanding of the broader landscape.

The Chinese government publishes other seemingly innocuous sources of publicly available data that, for example, outline security expenditures or job postings in the security sector that speak to an increased level of securitization in the Xinjiang region. Researchers like Adrian Zenz use this information to draw inferences about broader trends in the government's policies and rights abuses. Thus, while the CCP may not be especially transparent about the data it releases, creative researchers can use crumbs of data on other subjects to get a clearer understanding of the bigger picture with respect to the CCP's violations of human rights.

Mining CCP data is a double-edged sword. Once the data is published or becomes the subject of comment by outside researchers, the CCP will often take down the information, removing it from websites or other venues where it had been publicly available. These tactics are not unique to the human rights field. Many Chinese-language researchers find that once they use publicly available Chinese government data to report on an issue that the party finds offensive or threatening, the data disappears.

Private Efforts

There is no shortage of critical, data-driven research and reports on violations of human rights

in China. In recent years, civil society has devoted significant attention to pulling back the veil on the CCP's human rights abuses. In addition to the critical work of journalists, various think tanks, advocacy organizations, and academics have produced data-driven reports on the crisis in Xinjiang. Reports have drawn on Chinese government data, ingeniously reverse-engineered applications that are used to oppress the Uyghurs, and collected firsthand testimony. This work has shed a much-needed light on the severity of the situation.

The following is a representative sample of the cutting-edge, data-driven projects that are contributing to these efforts.

Xinjiang

- **Xinjiang Police Files.** The Xinjiang Police Files are a significant cache of data obtained from “confidential police networks” that include detainee images, police operations, and key documents documenting the scale of China’s mass incarceration campaign in Xinjiang.²¹⁰ The leak includes more than 2,800 images of detainees, 300,000 personal records, 23,000 detainee records, and 10 camp police instructions.²¹¹ The Victims of Communism Memorial Foundation sponsors this project to document the leaked data and, in 2023, was selected as a recipient of The Heritage Foundation’s Heritage Innovation Prize.²¹²
- **Xinjiang Victims Database.** The Xinjiang Victims Database is a crowdfunded database of testimonies from victims of the mass incarcerations of ethnic minority citizens in China’s Xinjiang Uyghur Autonomous Region.²¹³ The database documents primary evidence and includes various tools with which to analyze the data.
- **International Consortium of Investigative Journalists.** The ICIJ’s many important stories on Xinjiang include its reporting on the China Cables,²¹⁴ a Chinese government document characterized as a manual for running the internment camps. The China Cables represents the first leak of a classified Chinese government document revealing the inner workings of the camps, the severity of conditions behind the fences, and the dehumanizing instructions regulating inmates’ mundane daily routines. These briefings “are the first leak of classified government documents on the mass-surveillance and predictive policing effort.”²¹⁵
- **Xinjiang Papers.** In 2019, *The New York Times* acquired 400 pages of leaked Chinese documents, originally known as the Xinjiang Papers,²¹⁶ which detail speeches given by Chinese leaders, including General Secretary Xi Jinping, justifying mass internment. It also revealed resistance within the CCP to carrying out the mass crackdown on the Uyghurs. In particular, the Xinjiang Papers provide additional insight into justifications given for the Uyghurs’ internment. It is one of the more detailed leaks from China; the documents were provided to *The New York Times* by an anonymous CCP official. In September 2021, a set of digital files, identical to *The New York Times* files, was leaked to the *Uyghur Tribunal*. The *Uyghur Tribunal* files are now referred to as the “Xinjiang Papers.”²¹⁷
- **Radio Free Asia: Uyghur Service.** Radio Free Asia’s (RFA’s) Uyghur Service²¹⁸ has been among the more reliable and consistent sources of detailed firsthand accounts of life in Xinjiang. Its regular reporting is critical, and is augmented by longer-term, more systematic reporting, including an interactive webpage of firsthand accounts from Uyghurs who spent time in “reeducation camps”²¹⁹—as well as a February 2021 report, *Trapped in the System: Experiences of Uyghur Detention in Post-2015 Xinjiang*, based on firsthand testimony from eight individuals with “recent, direct experience in detention facilities” in Xinjiang.²²⁰ RFA has also kept track of mosques destroyed in Xinjiang.²²¹ Its regular reporting has been critical to gathering firsthand information and insights into life on the ground in Xinjiang.
- **BuzzFeed.** The Open Technology Fund, Pulitzer Center, and Eye Beam Center for the Future of Journalism funded a BuzzFeed series that estimated the total number of camp facilities,²²² collected firsthand accounts of conditions inside the camps,²²³ modeled conditions inside

a specific camp,²²⁴ assessed detention capacity,²²⁵ and revealed the existence of forced labor facilities within the camps.²²⁶ The project analyzed thousands of satellite images to evaluate the size and scope of the camps, providing indispensable proof of their existence that is corroborated by firsthand testimony from camp survivors.

- **Human Rights Watch: “Algorithms of Repression.”** Human Rights Watch acquired the code for the Integrated Joint Operations Program (an application used by Chinese authorities to engage in mass surveillance activities in Xinjiang) and reverse-engineered the application to gain insight into the indicators that were used to justify internment.²²⁷ This report provides unprecedented insight into the surveillance system that enabled the government to round up and intern the Uyghurs at such a rapid pace.
- **Reports by Adrian Zenz.** Adrian Zenz, Senior Fellow for China Studies at the Victims of Communism Memorial Foundation, has produced a suite of studies on the crisis in Xinjiang. Zenz authenticated various leaked documents that are known as the “Xinjiang Papers”²²⁸ and has written about the “Karakax List,” leaked documents with the personal data of over 3,000 Uyghurs that were used for the purposes of persecution.²²⁹

Zenz sourced CCP documents and analyzed patterns to explain how the security apparatus first piloted in Tibet was later repurposed in Xinjiang to carry out mass collectivization of Uyghurs.²³⁰ He also uncovered the CCP’s stated goals of sterilizing (by force and *en masse*) Uyghur women of childbearing age²³¹ and studied the forced labor-transfer schemes to which Uyghurs have been subjected in Xinjiang and throughout the region.²³² Among the methods he uses in his reporting are analyzing and evaluating Chinese documents, analyzing Uyghur testimony, and applying rigorous academic methodology to discern trends in the region.

- **Uyghur Human Rights Project: The Qaraqash Document.** The Uyghur Human Rights Project’s

report on the Qaraqash Document confirmed local involvement in the repression of Uyghurs and exposed specific official justifications for their internment. Among the justifications used: “visiting abroad,” “applied for a passport,” “applied for a passport and didn’t leave the country,” “overseas communication,” “prayed regularly,” “religious knowledge comes from grandfather,” and “had a beard.”²³³

Tibet

- **Tibetan Centre for Human Rights and Democracy: Tibetan Political Prisoner Database.** Maintained by the Tibetan Centre for Human Rights and Democracy, the Tibetan Political Prisoner Database²³⁴ documents more than 5,000 current or former political prisoners in Tibet. The purpose of the database is to document human rights violations perpetrated by the Chinese government in the Tibetan region. The database provides updated information on these prisoners’ detention status and notes whether they are religious political prisoners or imprisoned for some other reason.

Hong Kong

- **Hong Kong Watch: Political Prisoner Database.** Hong Kong Watch’s Political Prisoner Database²³⁵ keeps track of all persons prosecuted, arrested, or in detention for their involvement in protests. On January 6, 2022, Hong Kong had 721 political prisoners, of which 555 were given custodial sentences and 166 were detained pending trials for their involvement in protests in Hong Kong.²³⁶ The database links to open-source news articles to track the rate of increase in imprisonments and prosecutions from year to year.
- **Hong Kong Democracy Council: Hong Kong Political Prisoners Database.** Hong Kong Democracy Council’s Political Prisoners Database²³⁷ also monitors Hong Kong political prisoners and arrest information. As of August 17, 2023, there were 1,614 political prisoners. In addition to its May 2022 report marking 1,000 political prisoners in Hong Kong,²³⁸ The dataset links breaks down ages, offenses, sentences, and arrest locations of political prisoners.

Religious Freedom

- **Open Doors: World Watch List: China.** Every year, Open Doors’s World Watch List²³⁹ measures the persecution of Christians in countries worldwide. The list evaluates two different kinds of persecution: various forms of pressure that Christians face and violence perpetrated against Christians. It uses surveys completed by Open Doors staff, in conjunction with people on the ground in each country, to evaluate different types of persecution. China ranks 16th on the most recent index, exhibiting “very high” levels of persecution and especially high restrictions on church life.
- **ChinaAid: Annual Persecution Reports.** Since 2006, ChinaAid has published an annual persecution report²⁴⁰ that measures trends of Christian persecution in Mainland China. The reports use on-the-ground sources, eyewitness photographs, and official government public notices to document the CCP’s “Sinicization of Religion” efforts. The 2022 Annual Report found that the CCP is using new charges against Christians, including “organizing and funding illegal gatherings,” among others.²⁴¹

Miscellaneous

- **Freedom House: “Freedom on the Net: China.”** Freedom House conducts a comprehensive review of freedom on the internet,²⁴² evaluating scores in three categories: obstacles to access, limits on content, and violations of user rights. The methodology involves 21 questions with 100 sub-questions to determine the extent of a country’s internet freedom.²⁴³ In the most recent report, which covers developments from June 1, 2021–May 31, 2022, based on a scale of 0–100, China receives a score of 10/100 and is rated “Not Free.” According to the report, China has been “the world’s worst abuser of internet freedom” for eight consecutive years.
- **Freedom House: “Freedom in the World: China.”** Freedom House’s annual “Freedom in the World”²⁴⁴ report evaluates the state of freedom—specifically, political rights and civil liberties—in 195 countries and 15 territories worldwide. Countries are ranked numerically

on a scale of 0 to 100, with a possible total of 40 points for political rights and a possible total of 60 for civil liberties. The report evaluates rights as defined under the Universal Declaration of Human Rights.²⁴⁵ In the most recent report, which covers developments in 2023, China receives a score of 9/100 (–2/40 for political rights and 11/60 for civil liberties) and is rated “Not Free.” The report evaluates Hong Kong and Tibet separately from China and rates Hong Kong “Partly Free”²⁴⁶ and Tibet “Not Free.”²⁴⁷

- **ChinaFile: State of Surveillance.** According to its web site, ChinaFile’s State of Surveillance database²⁴⁸ documents and analyzes “some 76,000 government procurement notices and corresponding documents related to the purchases of surveillance technology by both central and local governments in China between 2004 and mid-May 2020—the most comprehensive accounting of China’s surveillance build-up to date.”
- **ProPublica: Inside the Firewall.** ProPublica’s website notes that “[e]very day since Nov. 17, 2014, ProPublica has been testing whether the homepages of international news organizations are accessible to browsers inside China.”²⁴⁹ The automated tests indicate that, in general, 15 of the 18 tracked homepages are consistently blocked.

Government-Supported Efforts

U.S. government–produced reports demonstrate the premium that the U.S. places on understanding the CCP’s human rights practices. Many of the reports listed below are annual, comprehensive reports documenting violations of human rights that the CCP is perpetrating against its own people. These efforts supplement (and often draw on) rather than replace the invaluable research produced by private sources.

- **Congressional–Executive Commission on China: Annual Report.** The Congressional–Executive Commission on China, created by the U.S. Congress, produces an annual report that covers violations of human rights in China.²⁵⁰ The

report includes region-specific sections on the rule of law in Taiwan, Xinjiang, and Tibet and examines functional issues such as religious freedom, human trafficking, population control, and ethnic concerns. The commission also maintains a database of political prisoners in China.

- **Congressional-Executive Commission on China: Political Prisoner Database.** The Congressional-Executive Commission on China's Political Prisoner Database²⁵¹ includes a chronological list of nearly 10,000 individuals believed to be detained currently or have been detained previously on political or religious grounds. The database lends insight into the total number of people currently detained in China and is also useful for tracking the release of political prisoners and those that perished while in custody.
- **U.S. Department of State, Bureau of Democracy, Human Rights, and Labor: Country Reports on Human Rights: China (includes Hong Kong, Macau, and Tibet).** The U.S. Department of State's annual report on human rights conditions across the globe includes a section on China that covers Hong Kong, Macau, and Tibet.²⁵² The report has been issued annually since 1999 and covers "internationally recognized individual, civil, political, and worker rights, as set forth in the Universal Declaration of Human Rights and other international agreements."²⁵³ Among other subjects, the report covers threats to the rule of law, freedom of expression and association, academic freedom, Internet freedom, political prisoners, and arbitrary detention. While the report cannot cover all threats to human rights, it is a relatively comprehensive survey of conditions in China.
- **U.S. Department of State, Office of International Religious Freedom: Report on International Religious Freedom: China (Includes Tibet, Xinjiang, Hong Kong, and Macau).** The U.S. Department of State's annual *Report on International Religious Freedom*²⁵⁴ documents conditions of religious freedom worldwide. The report is issued pursuant to the International Religious Freedom Act of 1998²⁵⁵ and covers religious demography,

the legal framework for respecting religious freedom, government practices, societal respect for religious freedom, and U.S. government responses to threats to religious freedom. Certain countries that regularly fail to respect religious freedom are designated "Countries of Particular Concern."²⁵⁶ The report on China also includes discussions of conditions in Tibet, Xinjiang, Hong Kong, and Macau. It is a useful resource for documenting year-to-year changes in conditions affecting freedom of religion and is considered one of the most comprehensive reports on religious freedom.

- **U.S. Department of State, Office to Monitor and Combat Trafficking in Persons: Trafficking in Persons Report: China.** The U.S. Department of State's *Trafficking in Persons Report*²⁵⁷ is issued pursuant to the Victims of Trafficking and Violence Protection Act of 2000²⁵⁸ and monitors trafficking in its various forms in countries worldwide. The report measures compliance with internationally recognized standards for combating trafficking in persons and ranks countries according to their compliance from best to worst in four tiers: Tier 1, Tier 2, Tier 2 Watch List, and Tier 3. China has been ranked on Tier 3 almost every year since the inaugural report in 2000.
- **U.S. Commission on International Religious Freedom: Annual Report: China.** The U.S. Commission on International Religious Freedom's annual report²⁵⁹ identifies topline trends in threats to religious freedom and issues policy recommendations on how to respond. The nonpartisan, independent federal commission monitors international religious freedom conditions globally.²⁶⁰ Its annual report on China has recommended that China be designated a "Country of Particular Concern" in the *Report on International Religious Freedom* every year since the report's 1998 inception. The commission's annual report is distinguished from the State Department's *Report on International Religious Freedom* by focusing primarily on policy recommendations rather than documenting violations of religious freedom.

- **U.S. Commission on International Religious Freedom: Frank R. Wolf Freedom of Religion or Belief Victims List.** The U.S. Commission on International Religious Freedom maintains a database²⁶¹ on religious prisoners of conscience, categorizing them as detained, disappeared, under house arrest, imprisoned, forced to renounce their faith, or “other.” Of the over 2000 individuals included in the database, China is deemed the perpetrator for nearly 800 individuals. In addition to the database, members of the commission are able to adopt Religious Prisoners of Conscience to advocate on their behalf; five of the 11 currently adopted religious prisoners of conscience are from China.²⁶²

Assessment

The Chinese government is deliberately opaque when it comes to human rights. While the Chinese government does report some data, the data provided has been widely criticized as inaccurate and categorized as propaganda. Data that deviate from the Chinese government’s narrative are either quickly removed or not readily available.

Private efforts struggle to improve transparency on human rights, given the complete lack of transparency from the Chinese government. These efforts have been instrumental in uncovering the Chinese government’s actions in Xinjiang. Transparency efforts regarding Hong Kong have notably grown. Private efforts have also been instrumental in improving transparency on rule of law, freedom of speech, and religious freedom.

Trends from 2023

Since the first edition of this report was published in 2021, there has been no major change in China’s general human rights trajectory.²⁶³ In Xinjiang, the regime continues to detain Uyghurs and other predominantly Muslim minorities in internment camps, though the quantity of such detentions appears to be decreasing. Nevertheless, the number of people still detained remains large, and many of the societal repercussions of the genocide will likely prove irreversible. Furthermore, for those still detained, the conditions in the camps does not appear to have improved. In April 2023, authorities in one prison released

26 corpses of detainees that had died in custody. Many of these victims had starved to death because, even in their dire circumstances, they chose to observe their religious requirement to fast during Ramadan and were not permitted to eat outside prescribed hours.²⁶⁴

In Hong Kong, civil liberties continue to erode under the weight of the National Security Law and the 2021 electoral “reforms” that ensured only people loyal to Beijing could hold office. Influential pro-democracy figures, such as Catholic Cardinal Joseph Zen and Next Digital founder Jimmy Lai have been targeted, and the latter is expected to spend the rest of his life behind bars. Meanwhile, the National Security Law’s long arm has penetrated other countries, with the Hong Kong government placing 1 million HKD (roughly \$128,000) bounties on the heads of eight pro-democracy activists living abroad and Chief Executive John Lee vowing that they will be “pursued for life.”²⁶⁵ At least one of these individuals had family members in Hong Kong questioned by the police, a worrying sign that the city is gradually becoming more like mainland China.²⁶⁶

In the rest of China, the government’s general suppression of human rights continued as usual. Beijing finally scrapped its draconian COVID-19 lockdowns in late 2022 following a year of growing public outrage that culminated in short-lived protests throughout the country. While many interpreted the scrapping of zero-COVID restrictions as evidence that the government listened to the people’s feedback, this was no indication of a relaxation of social controls in China. In fact, regardless of the role the protests had in prompting Beijing to finally reverse its failing policy, police used technology to identify, detain, and track the people who participated in the protests, as well as some others who were simply in the vicinity of one of these events.²⁶⁷

Following the further consolidation of Xi Jinping’s already unassailing political power at the 20th Party Congress in October 2022 and the annual two sessions in March 2023, the party’s grip on Chinese social and economic activity has tightened even more. New laws have been proposed or implemented that further increase the party’s control over civil society and clamp down on data and information flows both within and outside of the country.

Meanwhile, the party continues to persecute human rights lawyers and activists. In April 2023, a court sentenced two human rights lawyers to 12 and 14 years in prison simply for encouraging Chinese citizens to exercise the rights enshrined in the country's constitution.²⁶⁸ These sentences were harsher than those given just days earlier to the perpetrators of a human trafficking case, the initial coverup of which caused significant social outrage in 2022.

Indeed, China's human rights trajectory experienced no improvement during the past two years. If anything, the situation continues to deteriorate, due both to the authorities' underenforcement of laws aimed at protecting citizens' rights and the passage and overzealous enforcement of laws and policies aimed at silencing non-party-approved narratives and deterring or quickly stifling any form of dissent.

Opportunities for Further Research

This report should help to dispel the misconception that efforts to address human rights concerns in China are not data-driven. One of the many concerns raised by policymakers is the lack of information to inform decision-making; this is true on a range of issues, but it recurs repeatedly in human rights advocacy. On the vast majority of issues covered in this report, the idea that these issues are explored with less academic rigor is simply not true. Human rights concerns may be considered "soft" issues, less conducive to quantitative analysis per se, but the fact that they are investigated comprehensively through rigorous research is evidenced by the long list of reports already in existence.

The data-driven projects highlighted in this chapter do not constitute a comprehensive or exhaustive list. They were selected for the value they added to broader conversations about human rights challenges in China.

The methodologies applied to these reports were incredibly varied. Many of the reports mined and used Chinese data to demonstrate the CCP's stated goals of violating or undermining human rights; others drew on first-person testimony to elucidate individualized persecution; still others used open-source news to draw conclusions about the Chinese government's abusive activities or

inaction regarding protecting human rights. Some of these reports provided new insight into the Chinese government's repressive use of surveillance technology by reverse-engineering the application itself, while others applied quantitative methods to evaluate the impacts of aid on individual governments' decision-making.

This report can serve not only as a resource for identifying information and reports that lend insight into the CCP's intentions and actions, but also to inspire future research projects that fill in the gaps in current research. While all of the issues covered above merit additional research, a few subjects seem ripe for future cultivation.

- First, this chapter highlights more reports on Xinjiang than any other sub-issue. The research and attention directed toward Xinjiang may therefore serve as a model for the creativity and ingenuity that can be applied to investigate other human rights issues—especially when there is the political will to do so. For example, just as researchers have used both publicly available and leaked Chinese government documents to map the implementation of systematic human rights abuses in Xinjiang, efforts can be made to use similar documents to uncover abuses in other places, such as Tibet and Hong Kong.
- Future research should also do a better job of unpacking some of the motivations for China's human rights violations. A more thorough understanding of why the CCP does what it does may deepen the application of research in the policy context, particularly for policymakers who are focused on safeguarding U.S. national security and advancing U.S. interests. This may require additional analysis of the CCP's historical and contemporary justifications for its abuses. An understanding of these motivations will help policymakers to craft effective remedies for the harm that they cause.
- International relations scholars should conduct more research into the exportation of Chinese human rights abuses abroad, both through Beijing's influence over key U.N. bodies and its engagement with individual countries. In

particular, researchers should investigate how China's political influence over countries through economic and investment links, the Belt and Road Initiative, foreign aid, and other forms of leverage affect the human rights conditions in these other countries.

- Finally, additional work is needed to improve understanding of the extent to which Chinese civil society effects change.²⁶⁹ Nonconfrontational activism has been credited with bringing about significant change in China, with a key example being the government's decision, following years of efforts by civil society, to

increase the transparency of air quality and to declare a "war against pollution"—resulting in vastly reduced air pollution in the previously most affected regions, such as Beijing.²⁷⁰

More traditional activism involving protests—both via the internet and in person—also have been shown to result in change, but the change actors are often severely and brutally punished. Further research should be done to understand both how these different types of civil society work in China and the extent to which civil society and grassroots organizations in the country have changed over time.

Influence Operations

Defining Influence Operations

The RAND Corporation defines influence operations as “the coordinated, integrated, and synchronized application of national diplomatic, informational, economic, and other capabilities in peacetime, crisis, conflict and post-conflict to foster attitudes, behaviors, or decisions by foreign target audiences that further...interests and objectives.”²⁷¹ In short, they are nation states’ purposeful tactics to change foreign popular perceptions. These tactics range from spreading falsehood and raising what is true (but insignificant) to prominence to providing malign finances and subverting civil society. They also could be “black propaganda” (the source of which is disguised), “white propaganda” (the source of which is disclosed), or something in between.

Influence operations have been used by nation states for centuries, going at least as far back as the founding of the Sacred Congregation for the Propagation of the Faith (i.e., Propaganda Fide) in the early 17th century in Rome. However, China in recent years has significantly ramped up its global influence operations, especially those targeting Western democracies, raising alarms among not only policymakers but also the public in the affected countries. This chapter examines those CCP influence operations in more depth.

Why Transparency on China’s Influence Operations Is Important

A better understanding of the Chinese Communist Party’s (CCP’s) influence operations around the world is sorely needed for a few reasons.

Shaping the Narrative. First, although the CCP has been running influence campaign for years, only more recently have its tactics become more aggressive and sophisticated. As a Freedom House report pointed out, “top CCP officials have overseen a dramatic expansion in efforts to shape media content and narratives around the world,” resulting in “a multifaceted, adaptive, and complex set of tactics that are deployed across varied environments. They combine widely accepted forms of public diplomacy with more covert, corrupt, and coercive activities that undermine democratic norms, reduce national sovereignty, weaken the financial sustainability of independent media, and violate the laws of some countries.”²⁷²

These operations are key to China’s efforts to control and manage its image globally, dominate the narrative vis-à-vis Hong Kong’s (now lost) autonomy, the persecution of Uyghurs in Xinjiang, and Taiwan’s de facto independence—and ultimately challenge the global leadership of the United States.

Benign Projects and Cultural Challenges. Second, a large portion of China’s influence operations are carried out in conjunction with legal and benign public diplomacy, market transactions, and cultural exchanges with the affected countries. That means measures taken by those countries to counter Chinese influence may have implications for liberties at home. For example, TikTok, the popular Chinese-owned social media app, has drawn much public attention due to evidence showing its efforts to skew the views of the American public.²⁷³ Banning the app outright, however, has been challenging because of concerns about violating the First Amendment and tension with the need to preserve a free internet.²⁷⁴

Another example is Confucius Institutes, set up by China to insert its agenda in colleges and universities around the world but established in the name of educational and cultural exchange. Despite the risks these institutes bring, efforts to curb China’s influence in higher education often face opposition linked to the need to preserve schools’ broad freedom to forge academic partnerships at home and abroad. Policymakers in Western democracies, therefore, should weigh the need to deflect malign Chinese influence against the goal of defending civil liberties, and a prerequisite for striking that balance is a better understanding of where China’s influence operations lie.

Effectiveness. Third, although China’s influence operations in recent years have grown much broader, their effectiveness on the targeted countries is not clear. One of the CCP’s go-to influence tactics is coercing detainees, including dissidents and purged officials, to confess on television.²⁷⁵ This practice, though a blatant human rights violation, may not be as effective on foreign audiences compared to subtle social media campaigns that spread disinformation through bots. A 2020 study by Princeton University scholars examines 82 empirical studies of influence operations conducted by various governments, and it finds that those operations had varied success depending on whether they aimed at long- or short-term impact and their communication medium of choice.²⁷⁶

Because Chinese and other foreign influence operations are so pervasive and countering them costs scarce resources, it is important for

U.S. policymakers to allocate those resources to address influence operations that are more effective and detrimental to audiences at home. But that, again, requires a better understanding of how Chinese influence works—and where it does not work.

Transparency’s Deterrent Effect. Finally, transparency has a deterrent effect on potential influence operations that would have happened without it. Take Chinese funding to foreign higher education institutions as an example: China is known to use funding to academic institutions around the world as leverage to coerce them into silence on issues sensitive to the CCP, such as human rights abuses and suppression of pro-democracy movements. While receivers of those funds may prefer not disclosing the transactions, some countries, such as the United States, have laws and regulations requiring colleges and universities to report foreign gifts and donations.

In 2016, Georgetown inaugurated the “Initiative for U.S.–China Dialogue on Global Issues” with a \$10 million foreign gift from the Hong Kong–based Spring Breeze Foundation.²⁷⁷ The Spring Breeze Foundation is financed by the Bangkok-based CP Group, which the Department of Education reported “has ties to the Chinese government through multibillion dollar agreements.”²⁷⁸ A university spokesperson stated that Georgetown reports “all foreign gifts and contributions” and “gift agreements retain full institution independence,” though the details of the contract were not made public.²⁷⁹

While enforcement of these transparency requirements is often found lacking, they have led some universities to return and/or reject funding from China—such as the Netherlands’ Vrije University that did so in January 2022²⁸⁰—or divert the Chinese funding from the CCP’s preferred causes to those that advance democratic institutions—as the University of Montreal pledged to do in April 2023.²⁸¹ Some universities fail to comply with transparency requirements, such as Stanford University, which failed to disclose over \$64 million Chinese funding over a 10-year period. But Stanford was eventually forced to pay nearly \$2 million to the Justice Department as part of a settlement.²⁸²

Official Data from China

China's influence operations have for years been run under two pillars at the highest level of the CCP: its Central Propaganda Department (CPD) and United Front Work Department (UFWD). The CPD takes charge of all channels of communication in China and from China to the rest of the world, while the UFWD, loosely speaking, can be thought of as the “human resources” branch of influence that co-opts people and organizations that the party wants onboard.²⁸³

However, details about how influence operations work under these two pillars are not easily quantified through official Chinese data. The sprawling structure of agencies and offices within the party and the government makes it complicated to verify any information about their operations, and those agencies involved in the operations also keep a purposely low public profile.²⁸⁴

Nevertheless, there are some relevant publicly accessible data, often available only in Chinese—and sometimes only accessible from a Chinese IP address—such as registrations of organizations with certain party or governmental agencies. The Ministry of Civil Affairs, for example, maintains a searchable database of officially registered social organizations, including those under the UFWD. The records are available because the regime employs formal processes to mobilize its agencies for major operations, which produces information. But because there are close to 1 million social organizations in China, and because not all of them are involved in influence operations, it still requires an investigation to find the needles in the proverbial haystack.

China's state-owned enterprises sometimes publish information that reveals, at the very least, the party's use of the corporate sector in influence operations. For example, Sinopec, China's top petroleum conglomerate, noted in its 2019 annual report that the company “promoted the implementation of Guidance Opinion of Enhancing the United Front work, summarized and popularized the measure of United Front workshop.”²⁸⁵ The company has not released similar information in subsequent annual reports, although it is not clear whether it did not carry out those activities, or whether it did, but chose to not disclose them.

Chinese state media and party directives also provide a glimpse into objectives and leadership structures of the various agencies involved in influence operations. The CCP sometimes publishes documents that serve as guidance for carrying out United Front work, as was the case on September 15, 2020, when the party issued a directive for expanding the United Front role in supervising the private sector.²⁸⁶ Shortly afterward, on January 5, 2021, the CCP updated its 2015 United Front regulations, with the new rules highlighting the United Front's expanding foreign influence missions, including its “overseas United Front work” and “overseas Chinese work,” as well as its efforts to target “overseas Taiwanese compatriots.”²⁸⁷ Details about these often-covert influence activities are unsurprisingly scant, as documented in a 2022 book by open source intelligence researcher Alex Joske.²⁸⁸

The most transparency China has provided on its influence operations perhaps comes from U.S. laws and regulations. Chinese media operating in the United States must disclose their ownership and finances through the Foreign Agent Registration Act (FARA), which has brought some influence operations to light. CCTV America, the U.S. operation of China's state-owned TV channel, has spent \$40 million or more on influence operations each year since 2019, and *China Daily*, the CCP-owned English-language newspaper, spent over \$8 million each year since 2017.²⁸⁹ According to its 2017 FARA filing, *China Daily* spent nearly \$4.6 million on advertising in *The Wall Street Journal* and *The Washington Post* during a six-month period.²⁹⁰ Full-page *China Daily* content was printed as advertisements and appeared much like regular sections of those U.S. newspapers.

Moreover, because FARA regulations apply to any entities working as agents of foreign interests, U.S. companies running influence operations for the CCP also must disclose their activities. One such example is public relations firm Brown Lloyd James, which, according to a Freedom House report, charged the Chinese embassy \$144,000 for a six-month period for crafting, editing, and placing op-eds by Chinese diplomats on prominent U.S. news outlets.²⁹¹

Private Efforts

Translation applications and social media analytic platforms have made it easier to spot and analyze Chinese data.

While official data provide a very limited and incomplete picture of the scope and scale of Chinese influence operations, private efforts have helped to unveil these operations by exploiting various data sources, including those listed above, and using novel tools. The following is a sample—and by no means exhaustive—list of cutting-edge private efforts helping to piece together the puzzle of Chinese influence operations.

- **AidData: China's Global Public Diplomacy.** AidData, a research lab at the College of William & Mary, runs the China's Global Public Diplomacy Dashboard Dataset, which is an interactive map that displays quantifiable data on China's public diplomacy. It includes metrics for five types of public diplomacy (i.e., financial, cultural, elite-to-elite, exchange, and informational diplomacy) and PRC technical assistance initiatives. It also includes measures of how China is perceived by leaders in countries that receive its public diplomacy overtures.²⁹²
- **Alliance for Securing Democracy: Hamilton 2.0 Dashboard.** The Hamilton 2.0 Dashboard, published by the German Marshall Fund of the United States' (GMFUS's) Alliance for Securing Democracy, provides a summary analysis of the narratives and topics promoted by Russian, Chinese, and Iranian government officials and state-funded media on Twitter, YouTube, state-sponsored news websites, and via official press releases and transcripts published by their respective ministries of foreign affairs.²⁹³ The aim of the dashboard and search tool is to increase understanding of the focus and spread of state-backed government messaging across various information mediums.²⁹⁴
- **Alliance for Securing Democracy: Authoritarian Interference Tracker.** The GMFUS's Alliance for Securing Democracy's Authoritarian Interference Tracker catalogues the Russian and Chinese governments' activities to undermine democracy in more than 40 transatlantic

countries since 2000 using five tools: information manipulation, cyber operations, malign finance, civil society subversion, and economic coercion. The tracker shines a light on the tactics and trends that define the Russian and Chinese governments' interference efforts and highlights the interconnectivity between different parts of the asymmetric toolkit.²⁹⁵

- **The Citizen Lab.** The Citizen Lab is an interdisciplinary laboratory based at the Munk School of Global Affairs & Public Policy of the University of Toronto that focuses on research, development, and high-level strategic policy and legal engagement at the intersection of information and communication technologies, human rights, and global security. It uses a "mixed methods" approach to research combining practices from political science, law, computer science, and area studies. The lab's research includes investigating digital espionage against civil society; documenting Internet filtering and other technologies and practices that impact freedom of expression online; analyzing privacy, security, and information controls of popular applications; and examining transparency and accountability mechanisms relevant to the relationship between corporations and state agencies regarding personal data and other surveillance activities.²⁹⁶
- **Freedom House.** Freedom House is an independent research institution dedicated to the expansion of freedom and democracy around the world. Its 2022 report *Beijing's Global Media Influence* offers a comprehensive assessment of Beijing's global media influence and the ways in which democracies are responding. Drawing on media investigations, interviews, scholarly publications, Chinese government sources, and on-the-ground research by local analysts, it covers developments in 30 countries during the period from January 2019 to December 2021, and it updates and expands upon two previous Freedom House studies published in 2013 and 2020 on the subject. The report offers recommendations on how to bolster democratic defenses against CCP interference.²⁹⁷

- **Hoover Institution: China’s Global Sharp Power.** China’s Global Sharp Power project from the Hoover Institution at Stanford University tracks, documents, and evaluates China’s sharp power activities at the sub-national, national, and transnational levels. As the project states, sharp power “burrows deeply and deceptively into the soft tissues of democracies, seeking to subvert and sway them through methods” that are covert, coercive, or corrupting.²⁹⁸ The project’s research team has so far released over a dozen reports that investigate various mechanisms of China’s influence operations in the United States and other countries. It has also partnered with the Stanford Internet Observatory on case studies of the CCP’s campaign to shape global narratives on Hong Kong, the 2020 Taiwan presidential elections, and the COVID-19 pandemic.²⁹⁹
- **International Republican Institute.** The International Republican Institute is a nonpartisan, nongovernmental international organization that works with organizations and individuals across the globe to help citizens build democratic societies. Its Countering Foreign Authoritarian Influence initiative uses cutting-edge research, global convening, and equipping on-the-ground actors to help democracies fight back against malign influences from Beijing and the Kremlin.³⁰⁰
- **MapInfluenCE.** The Czech Republic-based MapInfluenCE project—initially known as the ChinfluenCE project, focuses on both China and Russia’s influence in Central Europe, specifically within the Visegrad nations of Czech Republic, Hungary, Poland, and Slovakia. The comparative nature of the project enables identification of the strategies and tactics employed by China and Russia and discernment of the convergences and divergences in their respective approaches. Its analyses include media, social network, and parliamentary issues.³⁰¹
- **Media Forensic Hub.** The Media Forensic Hub, based at Clemson University, builds society’s capacity to understand the context, origins, and impact of modern media. The center develops

and applies state-of-the-art techniques to broaden and deepen understanding of media, while working to increase the capacity of its students and community to apply them. Since 2020, the project has released a handful of investigative reports on specific case studies of China’s influence operations overseas, including topics sensitive to Beijing, like Uyghur forced labor.³⁰²

Assessment

There are severe gaps in the data provided by the Chinese government regarding influence operations. On one hand, there is some transparency provided by official data on health and economic diplomacy, and united front work (within Chinese-language sources). On the other hand, there is no transparency on digital and cyber operations that involve information manipulation or spreading disinformation.

Private efforts have greatly improved overall transparency on the Chinese government’s influence operations, particularly on digital and cyber operations. These efforts have also provided more transparency on health and economic diplomacy and united front work. With that said, there is still a need for more overall transparency on united front work.

Trends from 2023

China’s influence operations around the world are constantly evolving, but so are private efforts in many countries to uncover and counter them, making this one of the most dynamic fields in open-source China research.

First, China’s influence operations are scaling up. AidData’s tracking of China’s global public diplomacy, for example, shows a steady geographical expansion of the CCP influence activities both across issue areas and over time. This is not surprising but, rather, typical: The CCP’s approach to policy has for decades been to first experiment in a confined or limited setting before copying the successful “recipes” elsewhere.

Second, the technologies behind China’s influence operations are becoming more sophisticated, from more conventional means like print media and interpersonal operations to the internet and digital communication. It was once predicted that

the internet would be a force for democracy and a challenge to authoritarian rule. Instead, it has in some ways enabled and amplified China's influence operations on liberal democracies by providing the CCP with a range of advanced toolkits to push its messages abroad.

Third, on the bright side, private efforts to uncover and counter China's influence operations are scaling up too. In the United States, for example, open resource and data on Chinese influence conducted by a variety of nonprofits have blossomed in recent years, in no small part thanks to the increasing public awareness of the issue. Research has also emerged to address various Chinese influence activities in Europe, Latin America, and Africa, conducted by not only U.S. institutions but also those based in the affected regions, such as the Eastern Europe-based MapInfluCE initiative mentioned above.

Four, private efforts are increasingly using scalable technologies to provide transparency into China's influence operations. Compared to the traditional model of producing occasional research reports on particular issues in particular affected countries or regions, more think tanks are leveraging machine algorithms that can be applied across use cases at scale. The Alliance for Securing Democracy's Hamilton 2.0 Dashboard, for example, uses machine learning to detect and monitor news and social media presence of authoritarian governments—such as China, Russia, and Iran—and projects like that have great potential to be adapted and/or applied in other contexts at a relatively low fixed cost.

Opportunities for Further Research

The CCP's influence operations have received tremendous attention from the public, media, and national governments. However, the available open-source research has only scratched the surface. A few venues of future developments are outlined below.

First, some of the ongoing trends mentioned above provide opportunities for further research. For example, while the CCP's influence operations may be more focused on Western and developed nations, there need to be more studies of operations targeting underdeveloped and developing countries. These countries have limited access to

international media outlets—and hence, less attention from the public—but significant exposure to Chinese state media and their affiliates.³⁰³ Helping these countries counter China's malign influence is critical because these countries carry weight in the context of multilateral organizations.

Similarly, while some studies of China's influence operations are more technically scalable, such as those mentioned above that leverage machine algorithms to monitor and quantify text-based data, there need to be more private efforts that are scalable in similar ways. This is particularly relevant considering that China's influence activities themselves are becoming more technically scalable.

Second, while it has been an established understanding that China's influence operations are generally carried out under the two pillars of CPD and UFWD at the top level of the party, there is still insufficient understanding of how this system works in spreading propaganda, forcing technology transfers, and/or recruiting overseas talent to benefit the Chinese regime. While there is some publicly available literature on the inner working of the Chinese influence apparatus thanks to the groundwork done by Hoover/Stanford and Georgetown University's Center for Security and Emerging Technology, more can and should be done.³⁰⁴

More research on Chinese influence operations performed outside of these two pillars is needed as well. For example, the Project 2049 Institute's 2013 report on the People's Liberation Army's General Political Department (renamed the Political Work Department of the Central Military Commission) details the political warfare component of the PLA. These mechanisms do not fall within the CPD or UFWD umbrellas but do play an instrumental role in shaping global perceptions.³⁰⁵

Finally, there need to be more quantitative studies on the effectiveness of the CCP's influence operations. As discussed at the beginning of this essay, influence operations in general (conducted by any country) tend to have varied success. A MapInfluCE study in 2017 shows the same in the context of China. The initiative analyzed Chinese media outputs published from 2010 to 2017 by the four Visegrad countries (Czech Republic, Hungary, Slovakia, and Poland) and found that the resulting

image of China in those countries ranged from mostly negative to highly positive.³⁰⁶ Simply labeling everything as being influenced by China not only gives the CCP undue credit but is also unproductive in directing resources in more effective ways to counter China's influence.

Military

Defining Military

The realm of national security—including military affairs, intelligence activities, and internal security operations—is typically one of the most opaque, even in open democratic societies. In an authoritarian system, such as that of the People’s Republic of China (PRC), access to information is bound to be even more restricted.

At the same time, the U.S. defense and intelligence communities (collectively referred to here as the national security community) are arguably the most long-standing and yet often least noticed consumers of Chinese open-source literature. The widespread misimpression is that the national security community relies primarily or even solely on classified information. In reality, the national security community has often been not only the biggest consumer, but also one of the largest generators of open-source literature. For many decades of the Cold War, the Central Intelligence Agency maintained and supported the Foreign Broadcast Information Service (FBIS).

The FBIS was a vital resource for both government analysts and academics. It had access to hard-to-obtain journals and articles, providing translations of a variety of recent papers, books, newspaper and magazine articles, and radio and television broadcasts from countries around the

world. Moreover, it had a substantial linguistic capacity, translating dozens of these articles and broadcasts five days a week. It was commonly cited by university professors, think-tank analysts, and contractors, as well as analysts across a range of government agencies.

At the end of the Cold War, however, this effort was curtailed. The FBIS became the Open Source Center (OSC), which spent much more time analyzing than translating foreign articles and broadcasts. Access to the OSC, later renamed the Open Source Enterprise (OSE), became steadily more restricted; where once many university libraries and think tanks could get subscriptions to FBIS translations, the OSE became harder and harder for nongovernmental organizations and agencies to employ. The latest restrictions indicate that OSE outputs are now available only through classified networks.³⁰⁷

The irony is that this reduction in access has occurred precisely when there has been a massive proliferation of Chinese materials and data. In the 1960s, to have an entire year’s run of the *People’s Liberation Army Daily* (the PLA’s official newspaper) was a rarity. Now there is much readier access to a variety of Chinese journals, newspapers, and broadcasts, as well as social media and economic data. The opening of China to academics, including

students, has meant the ability to explore provincial and even township newspapers, official reports, and electronic media. Many Chinese newspapers and journals, including *People's Liberation Army Daily*, are available online.

As important, the growth in Chinese-language sources has made it far easier to undertake research using original-language sources rather than relying on translations. The various private institutes and research organizations examined in this report employ people who can read Chinese to varying degrees of fluency. As several analysts observed, however, the challenge is linking “tangible” and “intangible” aspects of Chinese strategy and military.

The enormous expansion of Chinese sources has raised new issues about how to define authoritativeness. When current Chinese-language materials were largely limited to *People's Daily*, *People's Liberation Army Daily*, and Radio Beijing, one assumed that these publications and broadcasts reflected some degree of official approval—while also recognizing the potential for disinformation from these same sources. Because access to Chairman Mao Zedong's China was so limited, there simply were few other options.

Beginning with Chairman Deng Xiaoping's opening of China to the world, however, a far greater variety of Chinese voices has emerged. How does one assess *Global Times*, for example, which is published by the state-run *People's Daily* but appears to publish extreme opinions and employ incendiary rhetoric that does not seem to mirror official government positions? And how should one assess publications like *Unrestricted Warfare*, a controversial book that emerged in 1999, written by two PLA colonels? Is it a statement of Chinese doctrine, the opinion of two Chinese military officers, disinformation, or revelation?

Why Transparency on China's Military Is Important

Transparency about China's military is important because it provides researchers with a baseline of data for assessing the current state of and ongoing trends in the Chinese military. Understanding the Chinese military requires consideration of both its tangible and its intangible aspects.

In terms of tangible aspects, there is a fair amount of information (usually not from the Chinese themselves) regarding weapons, equipment, and force structure. China now has two operational aircraft carriers, the *Liaoning* and *Shandong*, with a third, the *Fujian*, being fitted.³⁰⁸ The annual U.S. Department of Defense (DOD) report on *Military and Security Developments Involving the People's Republic of China*³⁰⁹ provides numbers of various major Chinese platforms, as do other publications such as the Institute for International Strategic Studies' report, *The Military Balance*.³¹⁰

What is much more difficult—and what is also the focus of many of the reports, papers, studies, and conferences that these various organizations support—is assessing the intangibles: governance, norms, processes, and interest groups. This is less a matter of assembling databases of quantitative information and more an issue of qualitative assessments of the Chinese national security establishment, its decision-making and management processes, and its own assessments of China's security situation.

Much as the DOD Office of Net Assessment concluded that a proper understanding of the Soviet threat required going beyond the “bean count” of numbers of Soviet nuclear and conventional systems, analysts tasked with examining the Chinese military often try to go beyond the numbers and types of Chinese platforms to understand how those systems might be staffed, trained, and employed.

Official Data from China

China publishes a wide variety of information, including data about its military and security forces, but it does so in an often-incomplete fashion, omitting key details and figures. Thus, the People's Liberation Army has published white papers for over two decades that have discussed such issues as the PLA's individual services, “military strategic guidelines” of the “Active Defense,” and mobilization.³¹¹ These biannual white papers have been the most authoritative sources of information on PLA doctrine and China's evolving military thinking.

But these same white papers provide little insight into many of the more basic aspects of the world's largest military, including such essentials

as the Chinese military budget. At no time was a breakdown of the single aggregate Chinese defense budget figure (\$224.79 billion for 2023) ever provided to indicate how much might be spent on each service. It has never been clear exactly what activities—for example, military research and development, space infrastructure, or biological research—are included in this figure and, equally important, what activities are not.

Similarly, the work reports issued in conjunction with the National People’s Congress and Chinese Communist Party Congresses provide important data and signposts on major Chinese security initiatives. They have provided hints, for example, as to the extent of Chinese internal security spending—but only sporadically. The announcement of the 14th Five-Year Plan (governing 2021–2025) noted that China’s military was accelerating its efforts to become “fully mechanized and informationized,”³¹² but no details were forthcoming on exactly what those terms might mean and what metrics were being employed, much less on how mechanized and informationized the PLA is now.

Open-source information is vital to any understanding of the Chinese national security establishment, Chinese strategic thinking, and therefore likely Chinese national priorities. This is especially true because the intelligence community is often much more focused on “current intelligence”: the who, what, where, when, and how of daily developments. The intelligence community has much less time for more in-depth examinations of issues such as national strategy, the evolution of military doctrine, and other “why” questions.

Consequently, there is much greater reliance on think tanks, federally funded research centers, and academia to flesh out current intelligence and provide the background and context essential to fully understanding such data. In some cases, the monitoring provided by nongovernmental organizations and analysts is as close and detailed as might be expected from the government. At the same time, a number of government-supported efforts provide public funding to encourage research by academics and other nongovernment analysts by promoting conferences and publications.

Private Efforts

There is a vast array of nongovernmental sources focused on aspects of China’s military and national security establishment, and many are not American. Two of the most notable reference volumes, for example, are produced in Britain and Sweden.

Britain and Sweden. The International Institute for Strategic Studies produces the annual *Military Balance* report, which provides basic data (numbers of troops, tanks, planes, warships, nuclear weapons, etc.) for every nation, including the PRC. For more than a decade, the China section has included an overview of the past year’s national security developments, including assessments of overall Chinese strategy, changes in force structure and organization, and major additions to the PLA’s order of battle.

Similarly, the Stockholm International Peace Research Institute publishes an annual yearbook that covers major military developments around the world. It includes assessments of Chinese and other military expenditures, recent arms control agreements, and arms transfers.³¹³

In combination, these two volumes provide a baseline of data regarding the Chinese national security establishment, including generally accepted data on the size of the force and its organization and key weapons platforms, as well as insight into Chinese military sales and expenditures.

However, these tangible elements provide only the skeletal outline of the Chinese national security establishment. To gain a more complete understanding, intangible elements such as doctrine, training, and organization must be incorporated to add muscles and tendons to the skeleton. Much of the work on intangibles is undertaken by various think tanks, contractors, and federally funded research and development centers. The following organizations and programs are indicative of the range of their activities.

Nongovernmental Programs. Two of the largest nongovernmental programs that monitor Chinese military and security developments are at the RAND Corporation and the Center for Naval Analysis. Each of these programs involves several dozen analysts. However, because these are federally funded research and development centers, much of their work is for U.S. government clients, although

analysts from both institutions do contribute regularly to academic monographs and conference volumes, making some of their research available to the broader public.

Contracting Agencies. Similarly, a host of government contracting organizations such as Johns Hopkins University’s School of Advanced International Studies, Leidos, and Booz Allen Hamilton conduct research that exploits available Chinese-language materials.

These various efforts typically focus on examining Chinese documents (usually in the original language by analysts who are fluent in Chinese) with a focus on specific topics such as Chinese views on nuclear deterrence, civil–military fusion, or counterspace operations.

Nonprofits. In addition, there are larger efforts by nonprofit think tanks whose products are more generally available. The examples provided here are by no means exhaustive or comprehensive; rather, they are intended primarily to provide a sense of their programs and the kind of analysis that is possible. Notable examples include:

- **Australian Strategic Policy Institute: China Defence Universities Tracker.** The Australian Strategic Policy Institute’s China Defence Universities Tracker³¹⁴ is a database of Chinese institutions engaged in military or security-related science and technology research. The tracker was created by the institute’s International Cyber Policy Centre, and its database includes information on roughly 160 institutions, including 87 civilian Chinese universities; 52 PLA institutions; China’s nuclear weapons program; eight security or intelligence-agency institutions associated with the Chinese Ministry of State Security (China’s foreign intelligence organ) and the Ministry of Public Security (China’s internal security organ); and 12 state-owned defense industry conglomerates.
- **Center for Strategic and International Studies: Asia Maritime Transparency Initiative.** The Center for Strategic and International Studies’ Asia Maritime Transparency Initiative (AMTI)³¹⁵ is an excellent example of the power of new technologies in creating transparency even where the PRC might try to increase its concealment.

The AMTI provides regular updates on Chinese land reclamation efforts as well as broader policy initiatives in the South China Sea. Its reports have documented the expansion of China’s artificial islands in the South China Sea, employing a range of data sources that includes observation satellite data, a portfolio of data that was once the preserve of militaries and intelligence agencies.

- **National Bureau of Asian Research and Sasakawa USA: Maritime Awareness Project.** Launched in 2016 by the National Bureau of Asian Research (NBAR) and the Sasakawa Peace Foundation and maintained by the NBAR, the Maritime Awareness Project³¹⁶ features an interactive map that depicts the maritime issues and disputes in the Asia–Pacific region. The project also features a timeline of incidents and an imagery database of various reefs and islands along the South and East China Seas.
- **Warsaw Institute: China Monitor.** The Warsaw Institute’s China Monitor³¹⁷ tracks Chinese influence operations in Europe. As one institute analyst noted, the purpose of such operations is not simply to improve China’s image, but also to counter and suppress opposing views.³¹⁸ This is consistent with Chinese concepts of “information warfare,” which spans both political and military activities and organizations. As PLA writings regularly note, “information warfare” is conducted as other military operations are conducted, with including explicit objectives, efforts to concentrate mass and gain surprise, and unity of effort.
- **University of California–San Diego: Institute on Global Conflict and Cooperation.** Headed by Professor Tai Ming Cheung, University of California–San Diego’s Institute on Global Conflict and Cooperation³¹⁹ was one of the first recipients of a U.S. government Minerva Research Initiative grant, intended to promote social science research on broadly defined security issues. One major focus of the Minerva grants is Chinese security thinking. Professor Cheung has done extensive work on China’s military–industrial complex.

Government-Supported Efforts

Although the focus of this report is on private, nongovernmental analyses of China, in the military realm, it is important to note that a key source of information is the United States government. Under the National Defense Authorization Act for Fiscal Year 2000,³²⁰ for example, the DOD produces an annual report on developments in the Chinese military and security establishment. This is perhaps the most authoritative source on Chinese military capabilities and reflects in filtered form the U.S. intelligence community's assessment of key development trends in the PLA.

Other U.S. government agencies that have issued important reports on Chinese military capabilities include the U.S. Defense Intelligence Agency, the Office of Naval Intelligence, and the National Air and Space Intelligence Center. Their reports often provide vital information that is not available from the Chinese, including much more detailed information on the Chinese military's order of battle (what units they have) as well as key equipment developments and observed military exercises and activities.

In addition to these agencies, several centers have been established by the U.S. government to foster greater interaction with the academic and think-tank communities. These organizations host conferences and publish monographs that provide opportunities for various members of the China military-watching community to share their research and findings.

- **U.S. National Defense University: Center for the Study of Chinese Military Affairs.** This center within the Institute for National Strategic Studies at the U.S. National Defense University³²¹ provides senior DOD officials with analysis on various aspects of China's military and strategic capabilities. It also produces a variety of publicly available reports, which have included recent studies on PLA strategic support and Chinese military diplomacy (for which it also maintains a database that is shared with both academia and other parts of the U.S. government).
- **Air War College: China Aerospace Studies Institute.** The China Aerospace Studies Institute³²² was

established in 2015 as an institute within the Air War College that focuses on all of China's flight-related activities. It therefore covers not only the PLA Air Force (PLAAF), but also Chinese army and naval aviation, the PLA Rocket Force, and Chinese space capabilities. It sponsors an annual conference and also publishes a variety of research papers, including papers by outside authors.

- **Naval War College: China Maritime Studies Institute.** Established in 2006 and located within the Naval War College, the China Maritime Studies Institute³²³ examines the maritime dimensions of China's military and economy, researching not only the PLA Navy, but also China's approach to shipbuilding, maritime law, and marine technologies. It sponsors an annual conference and publishes studies and papers examining various aspects of China's maritime power.
- **U.S.–China Economic and Security Review Commission.** This commission,³²⁴ established by congressional mandate in October 2000, produces an annual report examining various aspects of the U.S.–China economic and strategic relationship. To support its work, it commissions a variety of longer studies, which are usually incorporated in its annual report. The commission also holds regular hearings and roundtables that delve into aspects of China's security and economic policies, organizations, and processes.

Growing Challenges

While the Chinese publish more and more material, their efforts to limit the ability of outsiders to access that material are also intensifying. This is partly reflected in crackdowns on foreign scholars. The arrest of Japanese professor Nobu Iwatani in 2019, for example, raised concerns about whether other academics might face similar fates.³²⁵ Although Iwatani was subsequently released, this does not provide much reassurance. The announcement of new laws governing Hong Kong, under which anyone found advocating independence for Hong Kong may be liable to prosecution (even if such advocacy was outside of

Hong Kong or China), has raised additional concerns about potential vulnerability.³²⁶

The apparently systematic refusal to grant foreign academics access if they are researching sensitive or problematic topics is of even greater concern. In 2004, M. E. Sharpe published *Xinjiang: China's Muslim Borderland*.³²⁷ This anthology discussed various subjects related to Xinjiang and its Uighur population. It has since been determined that by 2011, 13 of the book's 16 authors had been blacklisted by China and are no longer able to obtain visas to conduct research.³²⁸ The study of the region and its people is now clearly considered a matter of national security concern, and foreign analysts are openly discouraged from pursuing such efforts.

At the same time, access to Chinese publications is also becoming more difficult. Bookstores in China where it was once possible to obtain Chinese military publications have imposed tighter restrictions on the ability of foreigners to purchase various “publicly available” materials. Nor is this solely a matter of accessing physical copies. The Chinese were among the earlier adopters of electronic databases for journals. The China National Knowledge Infrastructure (CNKI) database is one of several that provide subscribers with access to thousands of Chinese journals, including back issues.

Some discussions among China watchers, however, suggest that access to the CNKI and other databases is increasingly being monitored, with sensitive topics, especially those relating to aspects of national security, leading to incomplete search results. If such reports are accurate, it is not clear whether this is the result of a deliberate policy of restricting foreign access or the effect of Chinese data managers not wanting to violate China's own laws regarding access to information. In either case, the effect has been to reduce foreign scholars' access to Chinese materials.

Assessment

While the Chinese government is not very transparent with regard to its military, it is somewhat more transparent in comparison to other categories within this report. Military size is slightly better documented by the Chinese government but is still incomplete and without much

detail. Details on military armaments outside of images are limited from the public. There is a lack of transparency on PLA activities and arms sales by the Chinese government. PLA activity can be seen, but the official info is often not reported.

Private efforts have been most impactful in providing transparency on arms sales by the Chinese government and tracking PLA activities and movement. Other areas—such as doctrine, reform efforts, and policies—have also become more transparent because of these efforts. Ongoing open-source research efforts provide some indications of the kinds of information that available Chinese sources can provide.

China's Steadily Growing Military and Security Budgets. While China does not provide breakdowns of its defense spending and there are serious doubts about the accuracy of China's defense spending figures, there is nonetheless a general sense of the scale of this spending based on increases in outlays and especially in comparison with the projections of overall Chinese economic growth. During the past several years, the announced increases in the Chinese defense budget have begun to outpace the projected growth in the Chinese economy. This would suggest that the past decision to limit defense spending in favor of building the domestic economy is under review, if not eclipsed.

The PLA's Expanding Area of Operations. In the 1990s and early 2000s, Chinese writings focused on “near sea” operations by the Chinese navy, and reporting on the PLAAF indicated that it tended to operate mainly over the mainland. Coverage of the PLA Navy and PLAAF during the past decade, however, indicates that they are steadily moving farther afield. Chinese writings regularly discuss PLA Navy ships deploying to the Indian Ocean and the central Pacific, and a variety of sources mention that PLAAF units circumnavigate Taiwan.

Nevertheless, the declining ability to access Chinese sources, including the restrictions on scholars and academic exchanges more broadly, suggests that it may become more difficult to obtain information on some key areas of Chinese military activity, including their ongoing reorganization. As the Chinese reporting on the PRC's 14th Five-Year Plan indicated, the PLA is pushing to become “fully mechanized and fully informationized” by 2027.³²⁹ Chinese reporting will be a major source

of information on how well the PLA accomplishes this, but access to information in the coming seven years is likely to become more difficult.

Trends from 2023

The past year has seen little change in the level of transparency of China's military and security establishment. There has not been a new Chinese defense white paper published since 2019, which itself was four years after the last regular, biannual defense white paper. Hopes that the Chinese would return to a regular series of white papers have fallen short.

China has issued a number of security-related white papers since 2019, but none provide much insight into the workings of the People's Liberation Army. These include one on food security (a major concern for the top leadership of the Chinese Communist Party or CCP) in 2019,³³⁰ one on China's participation in U.N. peacekeeping operations in 2020,³³¹ and one on China's space program at the beginning of 2022 (although its title suggests that the paper was intended for release in 2021).³³² While China's space program is largely managed by the military, the space white paper provides no mention of the PLA or military space.

China increased its defense budget in 2023, announcing a year-on-year increase of 7.2 percent over 2022's 1.45 trillion Chinese yuan (RMB) to RMB 1.55 trillion—\$224.79 billion.³³³ A June U.S. intelligence assessment provided to the Senate, indicates China's actual defense spending is closer to \$700 billion USD, or RMB 4.85 trillion.³³⁴ If official Chinese numbers are taken at face value, reported spending would be at sustained levels. Notably, this is higher than the growth targets for the Chinese economy, set at around 5 percent.³³⁵ While the economic growth targets have been heavily reduced since the April National People's Congress session, there is no indication of a reduction in defense spending.

Chinese military exercises have provided some insight into the state of the PLA. The massive exercises held after the 2022 visit of then-U.S. Speaker of the House Nancy Pelosi (D-CA) to Taiwan, for example, provided some insight into PLA capabilities and doctrine, as well as training. Billed the largest exercises held in the Taiwan straits since the 1996 Third Taiwan Crisis, the operations

included test firings of Chinese missiles, naval operations involving both of China's current aircraft carriers, aerial refueling, and anti-submarine operations. The extensive nature of these operations will, after analysis, also provide some insight into the joint planning capacity of the Eastern War Zone command structure, and the PLA's joint logistics command, as well as the General Department for training in the Central Military Commission.

Similarly, Chinese media provides some insight into PLA activities. China Central Television (CCTV) Channel 7 is in part dedicated to the PLA and military news (It also provides agricultural reporting, particularly during morning programming). While all CCTV programming is strategic and public messaging, one can nonetheless derive some insights from the news and in-depth stories. A three-part series on the Zhurihe training base, for example, discussed China's "opposition force" (OPFOR). This force has apparently regularly defeated PLA forces, much like the American OPFOR has regularly defeated U.S. Army units at the U.S. National Training Center at Fort Irwin, California. Units seen operating in the series include PLA Ground Force drone operators, self-propelled artillery, reconnaissance, and combat engineering forces. Another brief story highlighted a number of Chinese sailors onboard China's aircraft carriers, including deck crews and engineering space personnel, as well as pilots.

In terms of Western analysis of China's security situation, think tanks and other research entities continue to make impressive inroads. One of the biggest revelations of the past year has been China's massive nuclear weapons-expansion effort. Beginning in the middle of 2021, analysts examining commercial overhead imagery identified at least three major intercontinental ballistic missile (ICBM) fields in western China. Totalling over 300 silos, these fields mark the long-feared "breakout" scenario, in which China rapidly fields a massive number of nuclear-tipped ICBMs in a short time. While there are debates about how many of the silos contain nuclear missiles and how many warheads are atop each, there is little debate that China has significantly increased the number of nuclear weapons it can now unleash against the United States.

Similarly, the Chinese expansion into the Spratly Islands and the rest of the South China Sea continues to be scrutinized by think tanks and other research entities as well. The announcement by the commander of the U.S. Indo-Pacific Command that China had fully militarized its artificial islands were not a surprise, in part because of regular reporting from groups like the CSIS Asian Maritime Threat Initiative.

Nonetheless, the analytical community focused on China's security capabilities remains relatively small. The problems of accessing Chinese open-source literature, including timely translations, have seen no resolution over the past year. While there are more conferences on aspects of the PLA, including by the China Aerospace Studies Institute (a counterpart to the China Maritime Studies Institute), demand for information continues to exceed supply.

Indeed, while aspects of Chinese security policy such as "civil-military fusion" and mobilization are receiving more attention, there remains a dearth of in-depth studies of these key issue areas. Consequently, the ability of the PLA, and the PRC writ large, to sustain a protracted conflict is under-examined, even as it is recognized to be a potentially vital capacity influencing Chinese strategic behavior.

While China strives to make its security activities less transparent (other than closely regulated releases of information), the number of analysts outside the U.S. government remains small and therefore limited in the range of topics that can be covered. Given the growing threat posed by the PRC, this is a dangerous combination.

Opportunities for Further Research

Given China's translucent—if not opaque—nature, there is an enormous range of areas that could benefit from sustained open-source research. Due to the tightening of Chinese-language sources on the mainland, increasingly second-language sources with firsthand knowledge of the PLA will increase in importance, for example: reports in Urdu from Pakistan regarding bilateral defense agreements, Russian archival sources regarding Chinese studies and thinking on strategic nuclear deterrence, or Spanish reports regarding Chinese engagement with Cuba and Venezuela, etc. With

the massive 2015 PLA reform, which saw a complete overhaul of the Central Military Commission (CMC), the transformation of seven military regions into five war zones/theaters, and the creation of several new services, each area includes a wealth of topics. For example:

- What are the functions of each of the 15 offices, commissions, and departments that comprise the new CMC?³³⁶ How do these relate to each other in terms of seniority and staffing? How are each of these staffed? For example, are they predominantly from the ground forces (now their own service), or are they deliberately made joint?
- What is the structure of the war zones? Do they all follow the same organizational approach, or are they customized to their environment? For example, how does the western war zone, which has no maritime border, compare with the eastern or northern war zone? Will future structural changes to the PLA be intended to support distant deployed combat operations to, for instance, Africa or Indian Ocean?
- What is the structure of the new services (PLA Ground Forces, PLA Rocket Forces, PLA Strategic Support Force)? How do they recruit and train their forces? How do they relate to the other services (PLA Navy, PLA Air Force) in terms of seniority? How are they represented in the war zone headquarters? For example, are there more senior PLAAF officers in one than there are in another?

Similarly, the steady modernization of the PLA, and especially the ongoing emphasis on "informationization" of the force, raises a host of questions. Specifically:

- How does the PLA train its forces to accommodate all of the new technologies? How successful have these efforts been thus far?
- How well has the PLA developed a cadre of noncommissioned officers (the backbone of Western militaries), and how do they relate to the unit's political officers, who are responsible

for, among other things, monitoring the welfare of the enlisted personnel?

- What is the process for acquiring more advanced weapons from the state-owned enterprise system, and what has been the impact of efforts to inculcate “civil–military fusion”? How responsive are elements of China’s military–industrial complex to changing requirements as defined by their customers, the PLA?

Outbound Investments

Defining Outbound Investments

The Organization for Economic Co-operation and Development (OECD) defines foreign direct investment (FDI) as a “category of cross-border investment in which an investor resident in one economy establishes a lasting interest in and a significant degree of influence over an enterprise in another economy.”³³⁷ Broadly defined, FDI can assume multiple forms, including an entity constructing new factories or power plants, expanding existing businesses, providing loans to overseas subsidiaries, acquiring voting stocks, completing mergers and acquisitions, and entering joint ventures.

Horizontal FDI generally refers to funds invested abroad in the same industry, for example, a retail clothing store in China opening a new branch in the U.S. or purchasing a competing clothing store in the U.S. *Vertical* FDI generally refers to investments up and down the supply chain, for example, a retail clothing store purchasing the garment manufacturer that supplies the clothing that it sells.

Finally, different definitions may include or exclude different classes of FDI. Some definitions, for example, limit FDI to investments that net at least 10 percent of voting power in a firm, distinguishing FDI from portfolio investment in stocks.

This chapter examines the various research initiatives dedicated to tracking Chinese outbound foreign direct investment (OFDI) or FDI originating from China. Many of these efforts are housed at foreign policy think tanks or educational institutions. Many are relatively recent creations, a product of the dramatic growth in Chinese OFDI over the past 10 to 15 years.

Why Transparency on China’s Outbound Investments Is Important

When the liberal economic reforms launched by Chinese leader Deng Xiaoping in the late 1970s began to bear fruit in the early 1990s, China was transformed into an economic juggernaut. Between 1992 and 2012, China’s annual gross domestic product (GDP) growth averaged in the double-digits, never falling below 7.7 percent, and reaching as high as 14.2 percent, inaugurating one of the greatest economic expansions in history.

For the first 15 years of this expansion, China was largely a destination for FDI from foreign sources. China also ran massive current account surpluses, relying first on an increase in trade with the United States, allowing it to amass large foreign currency reserves. Chinese OFDI began to rise precipitously in the mid-2000s, first exceeding \$5 billion in 2005 and reaching \$27 billion in 2007.

It nearly doubled in 2008 to \$56 billion as the world reeled from the global financial crisis, and nearly doubled again to \$108 billion by 2013, the year General Secretary Xi Jinping unveiled China's colossal economic connectivity project, the Belt and Road Initiative (BRI).³³⁸ Chinese OFDI finally peaked in 2016 at \$196 billion, before witnessing a sharp decline from 2017–2020, due in large part to stricter capital controls by Beijing, which sought to end the practice of wealthy business magnates transferring their wealth abroad under the guise of investment.³³⁹

The economic and geopolitical ramifications of this outflow of Chinese capital have been profound and far-reaching, from the Pacific Islands to Central America, from Africa to South Asia, and from the developing world to advanced economies like the U.S. In the process, China has overtaken the U.S., Japan, and the European Union as the leading trade and investment partner for a large—and growing—number of countries.

OFDI Transformation. For many countries, Chinese OFDI has been transformative in ways that are good, bad, and ugly.

First, the good: In some cases, Chinese investments in infrastructure, energy, and connectivity projects have improved economic performance and productivity, enhancing living standards and propelling economic growth. In some high-risk developing economies, Chinese lenders and investors have financed projects deemed too economically or physically risky by more traditional Western and international lenders. The developing world has a compelling need for trillions of dollars in infrastructure investments, and in some cases, Chinese sources have been their only options for financing and construction.

The bad: In more than a few cases, Chinese FDI flows have proven a double-edged economic sword, providing economic benefits that are either limited—in some cases to small groups of business elite, leadership networks, or Chinese firms themselves—or outweighed by economic costs. Chinese investments, particularly large-scale infrastructure projects, have frequently and credibly been criticized for failing to meet international financial and technical standards, for lacking transparency, and for contributing to irresponsible debt practices.

The Belt and Road Initiative is littered with examples of projects that have been hand-picked by autocratic elites and would not have met international standards widely adopted by more traditional lenders. While there are bright spots, the dark underbelly of the BRI is a trail of non-performing loans, unfulfilled promises, at-risk economies, and white elephant projects.

And the ugly: In multiple cases, Chinese OFDI has brought not just unfavorable economic consequences, but adverse strategic ramifications for the target country. Chinese investments, particularly in sensitive infrastructure projects and telecommunications networks, have repeatedly drawn espionage concerns. National security concerns have led numerous capitals worldwide to restrict Chinese telecom giant Huawei from assuming a role in developing their 5G networks.

In some cases, as with Sri Lanka, Chinese firms have been accused of signing secretive deals that later were shown to include sovereignty-violating provisions. Chinese firms have also been accused of illegally funneling funds to pro-China politicians. In addition, the Chinese government has grown increasingly brazen in using economic linkages and leverage as an instrument of its foreign policy, punishing foreign capitals economically when they upset the Chinese Communist Party or object to aspects of Chinese foreign policy.³⁴⁰

Geopolitical FDI. In most cases, FDI flows between countries, particularly advanced economies and democracies, are treated as purely economic transactions. Only occasionally do FDI flows into sensitive industries and advanced technologies trigger national security considerations and concerns. With China, however, a wider array of economic transactions have assumed geopolitical characteristics and implications. This is the product of two complementary trends.

- In the U.S. and a growing number of like-minded capitals, China is increasingly viewed as a strategic rival—or at least a potentially hostile competitor. Investments from geopolitically antagonistic sources naturally tend to attract greater scrutiny.
- China's outbound FDI has attracted unique scrutiny because of the intimate relationship

between the public and private sectors in China and China's unique ways of doing business.

Put simply, “Chinese company relationships with the Chinese government aren’t like private sector company relationships with governments in the west.”³⁴¹ Even outside the context of state-owned enterprises, there is an enforced nexus between the private and public sectors and a unique fusion between economics and geopolitics in Chinese foreign policy to an extent not seen in other developed economies.

Virtually all large Chinese firms, and even a growing number of joint ventures with foreign firms, are required to have Communist Party committees or “cells” embedded in their organizations with a formal role in business decisions.³⁴² They are required by law to share intelligence, upon request, with the Chinese state. “Chinese domestic laws and administrative guidelines, as well as unspoken regulations and internal party committees, make it quite difficult to distinguish between what is private and what is state-owned,” argues analyst Ashley Feng.³⁴³

According to one analysis done by Datenna, in roughly 40 percent of Chinese acquisitions in Europe from 2010 up to the present, the Chinese government had either a high level of influence—the ultimate controlling shareholder is a part of the Chinese government—or a medium level of influence—the Chinese government has substantial influence, but might not necessarily be seen as the controlling shareholder.³⁴⁴

This phenomenon has accelerated since Chinese General Secretary Xi Jinping’s rise to power in 2012, which heralded the reversal of a trend toward very gradual economic liberalization under his predecessors. “Since 2012, private, market-driven growth has given way to a resurgence of the role of the state,” notes China expert Richard McGregor.³⁴⁵ Even where the Chinese government does not exert direct control, the “lines have been blurred.”

China’s 2015 National Security Law, 2016 Cybersecurity Law, and 2017 National Intelligence Law effectively require firms to render assistance to the Chinese government when national security—a broadly defined concept in China—is invoked. The National Intelligence Law, for

example, “instructs every organization or citizen to support, assist, and cooperate with national intelligence work.”³⁴⁶

Official Data from China

The Chinese government regularly reports on trade and investment statistics, principally through its National Bureau of Statistics and Ministry of Commerce. However, while these statistics are sometimes corroborated by more reliable sources, China is often accused of manipulating its economic statistics—whether at the federal, regional, or local level—to serve the Communist Party’s interests.

OFDI statistics can be more difficult for the Chinese government to manipulate, particularly when the counterparty is an advanced economy, as the figures are generally corroborated by the destination of the investment. However, even when Chinese OFDI statistics are accurate, there are numerous cases of planned foreign investments that, for a variety of reasons, fail to materialize. This has become particularly common under the BRI. And while there is often much publicity around “new” investments, the cancellation or scaling down of proposed investments often goes unreported.

Private Research Efforts

In recent years, there has been a dramatic proliferation of new research initiatives, particularly in the U.S., but also further abroad, that are devoted to tracking Chinese FDI statistics and analyzing their implications. The growth in the number of Chinese FDI “trackers” is partly a result of the exponential growth in Chinese OFDI flows beginning in the mid-2000s and peaking in 2016.

The prominent attention now being accorded to Chinese OFDI is also a result of the geopolitical character that these investment flows have assumed, particularly since the 2013 announcement of the Belt and Road Initiative and the growing resources and attention that the BRI began to command in the years that followed. The BRI became a legacy project of Xi Jinping and was enshrined in the Chinese constitution in 2017. Since then, however, the BRI has faced a growing international backlash.³⁴⁷ In recent years, it has also suffered from a decline in new

projects that roughly parallels the decline in Chinese OFDI flows.³⁴⁸

Today, several prestigious think tanks and research institutes host a variety of Chinese OFDI “trackers,” each with different emphases and different sets of data and variables that they are tracking. Some are global in scope, tracking Chinese investments wherever they materialize; some look only at certain categories of investments; and some are focused on specific regions. The following are some of the most prominent Chinese OFDI trackers now in use.

- **American Enterprise Institute: China Global Investment Tracker.** The China Global Investment Tracker³⁴⁹ was inaugurated in 2005 and initially hosted by The Heritage Foundation. Today, the American Enterprise Institute’s China Global Investment Tracker (CGIT) is one of the oldest and most respected “trackers” in the U.S. The CGIT database includes over 4,100 economic transactions across energy, transportation, real estate, and other industries. The CGIT is a global tracker that covers only large Chinese-origin transactions of more than \$100 million and only investments that involve ownership of real assets, such as the purchase of a company or the construction of a factory. It does not cover, for example, bond purchases, foreign aid, or trade or investments of less than \$100 million.
- **AidData: “Mapping China’s Global Investments and Inequality.”** AidData³⁵⁰ is described as a “research lab” housed at the College of William and Mary’s Global Research Institute in the U.S. In September 2018, it published a dataset “geolocating” 3,485 Chinese investment projects worth \$274 billion that were implemented between 2000 and 2014. AidData also features datasets and reports covering Chinese development finance, seaport finance date, loan contracts, and public diplomacy efforts.³⁵¹
- **Mercator Institute for China Studies: Belt and Road Tracker.** The Belt and Road Tracker³⁵² published by the Berlin-based Mercator Institute for China Studies (MERICS) provides analyses on and tracks ongoing BRI-related developments and trends using various reports and graphics.

It focuses on BRI-related infrastructure projects, including railroad, pipeline, and port projects, investments in power generation and transmission, and digital infrastructure, but does not track projects still under construction or in the planning phase. MERICS publishes highly detailed, high-resolution maps based on a private database that it maintains with more than 2,500 entries drawn from “a wide set of Chinese and international official sources, industry associations, companies, and media.”³⁵³

- **Council on Foreign Relations: Belt and Road Tracker.** The Belt and Road Tracker³⁵⁴ published by the Council on Foreign Relations tracks three key economic indicators across 67 countries participating in the BRI. The three indicators are imports from China as a percentage of GDP, FDI from China, and external debt to China. It conveys the information in a shaded interactive map and also offers separate charts for each country included in the study, visualizing trends in the three indicators from 2000 to 2017. Data on imports from China and Chinese FDI are drawn from the International Monetary Fund databases. Data in the Index of Debt to China is based on data from the IMF and Export–Import Bank (EX–IM Bank) of the U.S., as well as “analysis of government announcements and media reports about Chinese development loans to Belt and Road countries.”³⁵⁵ The data take into account FDI, portfolio investments, and development loans and draw from other tracker projects listed in this study, including AidData.
- **Boston University Global Development Policy Center: China’s Global Energy Finance Database.** The China’s Global Energy Finance database³⁵⁶ is an interactive data project that analyzes financing for global energy projects by China’s two global policy banks: the China Development Bank (CDB) and the Export–Import Bank of China. The project notes that China’s policy banks have provided \$234.6 billion in energy finance since 2000, including \$1.8 billion in 2020.³⁵⁷ The interactive map published on the website organizes Chinese spending by region; by energy source type (coal, gas, hydropower, etc.); by energy subsector (power generation,

extraction, transmission, etc.); and by lender (CDB, EX-IM Bank, and jointly financed projects). It also offers individual datasets for each year from 2000 to 2020. The data are collected from the “official websites at the [Chinese] banks themselves or host country ministries, news reports, and official documents,” and “[t]hese sources are later verified through interview contacts in China and other host countries, when possible. Every record includes the year, location, energy source, subsector, lender, and project description.”³⁵⁸

- **Boston University Global Development Policy Center: China’s Global Power Database.** Boston University’s Global Development Policy Center³⁵⁹ also publishes the China’s Global Power Database, an interactive data project tracking all of the power plants financed by the China Development Bank and the Export–Import Bank of China worldwide as well as other forms of Chinese FDI, including mergers and acquisitions, debt finance, and greenfield investments. As of 2022, the database had tracked some 648 Chinese-financed power plants across the globe with a total of 171.6 gigawatts of power-generation capacity.³⁶⁰ The database displays deal types, the Chinese investor, percentage of ownership, capacity of the project, type of technology, operating status, and estimated CO₂ emissions.
- **Center for Strategic and International Studies: “Reconnecting Asia.”** The Center for Strategic and International Studies’ Reconnecting Asia tracker³⁶¹ offers an interactive map with detailed information on 14,000 infrastructure projects across the Eurasian landmass, including intermodal, railway, road, seaport, pipeline, power plant, and transmission programs. Each listed project is supported with detailed information on project status, total costs, start dates, completion dates, contractors, consultants, funders, and operators. The project has not been updated since June 2022.³⁶²
- **Boston University Global Development Policy Center: Chinese Loans to Africa Database.** The Chinese Loans to Africa Database³⁶³ tracks Chinese

lending to Africa since 2000. The database draws from official government documents, contractor websites, fieldwork, interviews, and media sources. Between 2000 and 2022, it is estimated that Chinese financiers signed 1,243 loan commitments worth US\$170.1 billion with African governments and their state-owned enterprises.³⁶⁴ For each loan, the database offers details on dollar amount, country, sector, purpose, and year. The database was first managed by the China Africa Research Initiative at Johns Hopkins University’s School of Advanced International Studies.

- **Datenna: China–EU FDI Radar.** The China–EU FDI Radar³⁶⁵ is an interactive map produced by Datenna, an information services company in the Netherlands that tracks Chinese investments in Europe. The project makes a determination regarding the level of Chinese state influence in various European investments, grading projects as having high, medium, or low state influence. To make that determination, Datenna uses a “proprietary algorithm which takes into account the entire shareholder structure, shares being pledged, level of state-control of any investors and other relevant factors.” A “high-level of state influence” grade means that “the ultimate controlling shareholder is part of the Chinese government.” The China–EU Radar also organizes acquisitions by sector and country. From 2010 up to the present, nearly 800 acquisitions have been covered, in which 277 acquisitions, or 29 percent, carry a high risk of influence.³⁶⁶
- **Henry L. Stimson Center: Mekong Infrastructure Tracker.** The Washington, DC-based Stimson Center’s Mekong Infrastructure Tracker³⁶⁷ platform is a “resource for researchers to track, monitor, and quantify the development of energy, transportation, and water infrastructure assets and the social, economic, and ecological changes they bring to South East Asia.” It focuses on several regional countries, including Myanmar, Vietnam, Cambodia, Laos, and Thailand, and also tracks several projects in the bordering provinces of southeastern China. The tracker is run by the Stimson Center’s

Southeast Asia Program and supported in part by the U.S. Agency for International Development. It offers three “data tools,” including a Mekong Infrastructure Tracker Dashboard, Suitability Mapper, Mekong Project Impact Screener, and Mekong Deforestation App. All data are derived from open sources, including government websites, company project profiles, development banks, nongovernmental organizations, media reports, and other research institutions, including several of the other trackers listed in this chapter.

- **Lowy Institute: Pacific Aid Map.** The Australia-based Lowy Institute’s Pacific Aid Map³⁶⁸ is an analytical tool designed to examine the provision of foreign aid among the South Pacific island nations within Micronesia, Polynesia, and Melanesia. It includes data on more than 57,000 projects in 14 countries from 67 donors from 2008 to the present. The data are freely available through the website’s interactive map or an Excel spreadsheet. The map offers detailed data on total aid committed to and spent in countries like Kiribati, Samoa, Vanuatu, and the Cook Islands. The data are further categorized by donor; sector; type (grant or loan); and status (complete, in progress, on hold, etc.). The map also offers basic population, demographic, and economic statistics for each country. Currently, the Pacific Aid Map offers comprehensive data from all donors through 2020 and allows the viewer to compare the levels of foreign aid provided by China to the levels provided by the U.S. Australia, Japan, the World Bank, the Asian Development Bank, and other donors.
- **Inter-American Dialogue and Boston University Global Development Policy Center: Chinese Loans to Latin America and Caribbean Database.** The Chinese Loans to Latin America and the Caribbean Database³⁶⁹ tracks loans from China’s policy banks, the China Development Bank, and China Export–Import Bank to Latin American and Caribbean governments and state-owned enterprises. Chinese loans are organized by destination; dollar amount; type (energy, infrastructure, mining, other); purpose, lender, and

year. The website also shows the number of loans accepted by each country from 2005 to 2022, from one \$50 million loan to Peru to 16 loans to Venezuela worth \$60 billion. The database gathers its data from China policy bank websites, host country ministries, other official documents, and news reports.

- **Inter-American Dialogue: China–Latin America Commercial Loans Tracker.** The China–Latin America Commercial Loans Tracker³⁷⁰ tracks loans from China’s “big five” commercial banks—the Industrial and Commercial Bank of China, Bank of China, China Construction Bank, Bank of Communications, and Agricultural Bank of China—to Latin America and the Caribbean. Chinese loans are organized by destination; dollar amount; sector (energy, infrastructure, mining, other); subsector (transport, hydropower, renewable, oil and gas, electricity transmission, other); project; lender; and year. The website also shows the number of loans accepted by each country from 2005 to 2022, from one loan to Honduras to 36 loans to Argentina. Like with the Chinese Loans to Latin American and Caribbean Database, the tracker gathers its data from China policy bank websites, host country ministries, other official documents, and news reports.
- **Rhodium Group and National Committee on U.S.–China Relations: U.S.–China Investment Project.** The U.S.–China Investment Project³⁷¹ is “a multiyear research initiative” with the Rhodium Group, a U.S.-based economic research firm, and National Committee on U.S.–China Relations, a nonprofit educational organization, as its lead organizations. It is designed to bring more transparency to China–U.S. capital flows. The project’s database uses proprietary transactions data to track new investments, acquisitions, and venture capital flows using data drawn from press releases, company filings, business registrations, and regulatory records, offering a degree of specificity and granularity. Presented through an interactive map, the data can be organized by industry (agriculture, energy, etc.); type (financial or strategic); investor ownership (private or state);

stake (controlling or minority); and entry mode (acquisition or greenfield). An interactive map displays Chinese FDI into the U.S. by year, industry, sector, deal type, and government ownership. It estimates that Chinese investments in the U.S. peaked in 2016 at nearly \$50 billion before falling rapidly to \$7.2 billion in 2020. The data also display U.S. investments in China by province and Chinese investments in the U.S. by state. In addition, research papers provide qualitative and quantitative analysis of two-way investment flows.

- **Paulson Institute MacroPolo: The China Footprint.** MacroPolo’s China Footprint³⁷² “looks beyond the highly scrutinized bilateral trade relationship and instead draws on the best available sources to paint a composite picture of Chinese consumption and direct investment in the United States.”³⁷³ To that end, the project tracks various forms of China–U.S. economic engagement using data drawn from the Rhodium Group’s U.S.–China Investment Project, Pitchbook Figures, CB Insights, the National Association of Realtors, the U.S. Department of State’s Bureau of Consular Affairs, the U.S. Department of Commerce, and the Institute for International Education. An interactive map offers annual statistics covering the years from 2010 to 2019 broken down into six categories: FDI; venture capital; home purchases; EB-5 investments (eligible immigrant investors are permitted to become lawful permanent U.S. residents by investing at least \$900,000 in the U.S.); education; and travel. The total figure reached a peak in 2016 at \$111.5 billion before falling to \$75.9 billion in 2019.

Assessment

There are severe gaps in the data provided by the Chinese government with regard to outbound investments. There is a near-complete absence of official data on Chinese loans—specifically, information on the terms on which these loans have been provided. As Derek Scissors, creator of the American Enterprise Institute’s China Global Investment Tracker, states, “China’s statistics for outward direct investment are not presently useful.”³⁷⁴ The Chinese government’s defense-linked

outbound flows are also not transparent. For example, China reports the majority of its outward investment as occurring *in* Hong Kong, when it in fact *passes through* Hong Kong. BRI projects and Chinese aid are slightly more transparent.

Private efforts have been instrumental in providing more transparency on BRI projects, FDI, loans, and aid. FDI is tracked more closely on the receiving end. Even with private efforts, defense-linked outbound investments are still very non-transparent.

Trends from 2023

The defining contemporary trend in Chinese OFDI is the dramatic increase from 2005 to 2016, from \$12 billion to \$196 billion, and the precipitous decline in the years since then, caused in part by stricter capital controls from Beijing and later by a slowing global economy. In 2017, Chinese OFDI fell 19.3 percent from its 2016 peak to \$158 billion.³⁷⁵ It fell to \$143 billion in 2018 and then to \$137 billion in 2019.³⁷⁶ Interestingly, Chinese OFDI then rose to \$154 billion in 2020, and even \$179 billion in 2021, before falling back to \$163 billion in 2022.³⁷⁷

What explains this massive rise and fall? Inbound FDI into China began to surge in the early 1990s even as OFDI remained stagnant. From the mid-1990s to the mid-2000s, China was accumulating \$40 billion to \$60 billion per year in inbound FDI, while OFDI was averaging well under \$10 billion annually. This, and a massive current account surplus from trade with the U.S., allowed China to accumulate large currency reserves. Using these reserves for something other than holding low-yield U.S. bonds was one motive for the development of the BRI.

In recent years, a slowing global economy, caused in part by the COVID-19 pandemic, capital controls, and rising Chinese debt-to-GDP levels, Chinese OFDI has become choppy. In the U.S. in particular, from 2021 to July 2023, China has invested \$4.8 billion through 14 deals, and the first half of 2023 only had three deals worth \$400 million.³⁷⁸ In the U.S., the fall in Chinese investments is partly a product of heightened investment screening for Chinese projects, but the phenomenon is global.

According to Boston University’s China Global Energy Finance Database:

In 2021, China's policy banks provided no new energy finance commitments to foreign governments for the first time since the start of the 21st century. Since 2000, Chinese policy banks provided \$234.6 billion in financing to foreign governments in the energy sector. The China's Global Energy Finance Database tracks and displays this overseas development finance in the energy sector provided by China's two global policy banks—the China Development Bank and the Export-Import Bank of China.³⁷⁹

In Africa, China offered over \$170 billion in loans between 2000 and 2022 with over half, or \$109 billion, of the total invested in the transport and energy sectors.³⁸⁰ The Chinese Loans to Africa Database shows that total Chinese committed lending to all African countries peaked in 2016 at \$28.5 billion, but by 2022 had fallen to under \$1 billion.³⁸¹ Similarly, the China–Latin America Finance Database website notes that “Chinese policy bank finance to [Argentina, Brazil, Ecuador, and Venezuela] and other countries in the region has decreased markedly in recent years.”³⁸²

Derek Scissors argues that in 2020, it became increasingly challenging to find documentation of Chinese entities investing overseas. “COVID-19 either wiped out Chinese investments or Chinese reporting of investments.”³⁸³ China's numbers used to track at least loosely with independent data sourced from the destinations for Chinese investment. That, Scissors said, is no longer the case. “Whenever things become stressful, Chinese companies say less.” In 2021, global OFDI flows increased 77 percent to exceed pre-pandemic levels while Chinese flows increased to \$179 billion.³⁸⁴ While China is maintaining its position in foreign financial and bond markets, its construction activity and purchase of foreign assets have plunged considerably. They may be recovering in 2023, which is a trend policymakers should monitor.

Opportunities for Further Research

There continue to be ample opportunities for additional research in this field beyond the expanding number of existing efforts. Many projects are now evaluating Chinese investments on a regionwide basis, but there is room for more data collection and analysis at a subregional level. The Stimson Mekong Infrastructure Tracker offers a great example and model for such an initiative.

To date, ongoing research efforts have focused largely on the “what” and “where” of Chinese investments. Less attention has been paid to *how* these investments are affecting the host countries and the regions at large. Specifically, there is a need for greater focus on the impact of Chinese investments on local governance, institutions, and populations. The Center for International Private Enterprise,³⁸⁵ for example, has conducted regional case studies, including in Southeast Asia, that assess the impact of Chinese investment on regional transparency and good governance. This type of effort serves as an important tool both by identifying the benefits and risks of Chinese investments and by empowering officials to develop practical policy solutions in order to mitigate risk.

Beyond considering the “what” and “where,” further research opportunities include developing indicators that help determine *why* China invests in certain countries over others. Such research compares China's major targets—such as the top 20 countries it invests in—to its totals over time, and assesses if there are certain characteristics that determine investment preferences. For a more concise approach, further research can identify sectors deemed strategic, such as rare earth minerals and ports, and assess how such sectors, along with the goods they possess, may impact Chinese investment practices. This approach would be beneficial to U.S. policymakers hoping to better understand Chinese investment patterns and to craft strategies that benefit U.S. national security interests.

Politics and Law

Defining Politics and Law

The People's Republic of China (PRC) is a one-party-state governed by the Chinese Communist Party (CCP). Chinese politics therefore include both the politics of the state and those of the party, with considerable overlap. Chinese politics span a wide range of issues.

National Governance. To understand Chinese politics, one must recognize the dual nature of China's political structure. Because CCP rule is absolute and is codified in China's constitution, it is necessary to consider not only government leaders, such as members of the State Council, but also the CCP leadership, which is where the real power resides. While the vast majority of government officials are members of the CCP, their ranks in the CCP are not always equivalent to their positions in the state. In most cases, a leader's position in the party has a greater impact on his influence than his position in the government. At the national level, the most important leaders are thus the members of the CCP Central Committee, especially its Political Bureau (Politburo) and the Politburo Standing Committee.

Provincial and Local Governance. This dual chain extends down through the provinces to cities and even to districts, townships, and villages. It is important to identify and track the career

development of the leaders of China's 27 provinces and four provincial-level municipalities—Beijing, Tianjin, Shanghai, and Chongqing.

Given China's dual-governance structure, it is important to identify and track not just the provincial governors and municipal mayors, but, even more importantly, their corresponding party secretaries. Because of the importance of the party committees that set Chinese policy, party secretaries outrank governors and mayors, who often serve concurrently as deputy party secretaries.

Given the top-down structure of CCP governance, there is considerable overlap between national and provincial governance. The party secretaries of some key provinces and municipalities, such as Beijing, Shanghai, and Guangdong, often concurrently hold seats on the Politburo, and many provincial governors and deputy party secretaries are in the CCP Central Committee. Provinces also serve as training grounds for national-level leadership. Most of those appointed to the Politburo or its Standing Committee—as well as the heads of many key central government ministries—rose through the party's ranks in the provinces.

Ethnic and Religious Groups. Another aspect of domestic governance below the level of the national government is the issue of ethnic groups and associated politics. More than 50 ethnic

minority groups are officially recognized in China, and while these groups have only a fraction of population size of the majority Han Chinese, they nonetheless represent a factor in Chinese domestic policymaking.³⁸⁶ One of the reasons for the outsized influence of these groups is that some of them are concentrated in pockets in strategically relevant border regions. Furthermore, there are religious issues that overlap with ethnic issues in some of these groups. These serve as a separate source of concern for the officially atheistic CCP, which views all religions—especially those with foreign connections—with suspicion.

The CCP thus sees ethnic minority groups as both a challenge to its rule and an opportunity for cooptation. It has created many policies aimed at pulling these groups into the system, while at the same time assimilating them into Chinese society and watering down their separate ethnic identities. An extreme example of these policies is the forced assimilation and indoctrination of Muslim minorities in the Xinjiang Uyghur Autonomous Region, which the U.S. and multiple other governments have labeled genocide.

Political-Economic Institutions and Policymaking. Because of the Chinese “socialist market” system, state-owned enterprises (SOEs) are still a vital part of China’s economy, and their leaders are an important component of the CCP. China’s banking system is also state-run. The heads of such entities as Sinopec (the China Petroleum and Chemical Corporation) or the China Aerospace Science and Technology Corporation manage hundreds of thousands of workers and play a central role in the Chinese economy.³⁸⁷ These people are also part of the governance structure, and some of them go on to serve in senior party leadership roles. This trend has become more noticeable since Chinese General Secretary Xi Jinping came to power, and the representation of former SOE heads in the 20th Central Committee and its Politburo—which were appointed in October 2022—is particularly notable.³⁸⁸

In addition, not all SOEs are at the national level; there are also provincial and even township and village-owned enterprises, all of which have a measure of influence on Chinese politics. Because of the role and importance of SOEs at all levels, any understanding of Chinese politics

requires assessing and monitoring economic decisions, which affect and are affected by other political decisions.

Factional Politics. Chinese politics—and the broader Chinese society—are built on relationships, not just official lines of authority. While the CCP bans formal factions, leaders form alliances and loyalty networks among peers with which they have developed trust via overlapping work experience. Common familial ties, academic backgrounds, and shared ancestral home or home province are also common factional links.

Thus, while members of Chinese political factions are usually broadly aligned on policy priorities, the true factional divisions are between relationship networks. The late former CCP General Secretary Jiang Zemin led what was known as the “Shanghai faction,” as it consisted largely of individuals who worked under him in Shanghai. Li Keqiang, who left the Politburo Standing Committee in fall 2022 and stepped down as premier in March 2023, was a protégé of Xi’s predecessor Hu Jintao. The past 10 years have seen Xi all but dismantle these factions and replace them with his own protégés, many of whom worked under him in Fujian and Zhejiang provinces or in his brief stint as party secretary for Shanghai.

Civil Society. Because of the extreme constraints the CCP and PRC government place on Chinese civil society (including nongovernmental organizations), it is rarely an effective source of transparency into the country’s politics, as it is in many other systems. The Chinese government manages its own versions of various organized religions and restricts involvement in all but those few that are officially sanctioned by the state. Think tanks are usually associated with government ministries. Universities and other academic establishments have CCP committees and party secretaries, in addition to being supervised by government bodies such as the Ministry of Industry and Information Technology and the Ministry of Education. Non-governmental organizations must comply with strict registration requirements and are so constrained that they tend to focus on areas where they can cooperate with the government, rather than operating independently. While some of these types of organizations have agendas independent of the CCP and have been known to push

their boundaries, they do not do so openly, making them an ineffective source of information.

Foreign Policy

Another aspect of Chinese politics is Beijing's dealings with outside countries, groups, and international organizations. China's approach to foreign policy largely resembles, and its strongly influenced by, its domestic politics. As with Chinese domestic politics, understanding Chinese foreign policymaking is complicated by the very different structures and approaches that characterize the PRC. Because of the CCP's extensive reach, as well as China's "market socialist" system, the PRC has a much wider array of tools at its disposal for the conduct of foreign policy than most other countries.

Chinese SOEs, for example, make decisions based in part on broader national objectives and are not as constrained by concerns about returns on investment as private enterprises would be. The Chinese government can invite foreign students to attend Chinese universities, because the state runs the educational system. At the same time, the government can support various educational outreach efforts abroad including Confucius Institutes, which are managed by a body within the Ministry of Education, as well as keep tabs on Chinese students abroad by funding and directing Chinese Students and Scholars Associations.

Diplomatic Activities. For a long time, Chinese diplomats were relatively quiescent, but in the past several years, they have assumed a higher profile. Not only does the Ministry of Foreign Affairs now hold more frequent press briefings (as does the Ministry of National Defense), but many diplomatic outposts and their staff regularly engage on social media. The Chinese have also become more active at the United Nations and its subsidiary specialized agencies such as the World Health Organization and the International Telecommunications Union.³⁸⁹ As important, given the growth in Chinese power, other countries are now seeking Chinese diplomatic participation, and Chinese views are consulted on a range of issues from climate change to dealing with challenging states like North Korea.

Foreign Economic Activities. Since the rise of Deng Xiaoping in the late 1970s, China has

complemented its political outreach to other countries with overseas economic activities. Whether it is attracting foreign investment to the coastal special economic zones or integrating itself into various supply chains, China's trade, investment, and tax policies have played a role in its growing diplomatic strength. China exploits its position as a major importer and exporter to influence and coerce other countries; it views both positions as providing significant leverage.

In the 21st century, China has developed economically to the point that it has established an array of banks and programs that parallel and rival Western entities. These include the Asian Infrastructure Investment Bank, the Chinese Export–Import Bank, and the Belt and Road Initiative, as well as its de facto leadership over the BRICS (Brazil, Russia, India, China, South Africa) grouping and its associated New Development Bank, which is headquartered in Shanghai. Chinese SOEs also play a role in expanding China's ties to foreign partners, integrating economic and diplomatic interests. China actively seeks to play a role in the setting of industrial and business standards. While part of these efforts is a matter of trade and economics, there is a geopolitical component as well.

Educational Outreach Activities. Another aspect of Chinese external relations has been the exploitation of educational opportunities, both at home and abroad. China has used the Ministry of Education's Confucius Institutes to establish outposts in various educational institutions around the world. Originally presented as tools for promoting Chinese-language and culture studies, these institutes have been able to use the large amounts of cash available to them to gain leverage over host institutions by becoming a significant part of their budgets. Similarly, China invites foreign students to attend Chinese universities, often at little or no cost. This helps not only to enhance China's image, but also to foster relations with potential future foreign leaders.

Scientific and Technological Cooperation. China also makes full use of its growing scientific and technological base to foster ties with other states. In the realm of space exploration, for example, China has established a regional space organization, the Asia Pacific Space Cooperation

Organization, which it heads; has exported satellites to a variety of states; and has helped to construct space-related infrastructure in various countries, ensuring that it retains access to and even control of many of those facilities. Beijing recently announced that it would cooperate with Russia on a joint lunar exploration program. China has also engaged in joint research with European partners in various areas of advanced computing.

China's Evolving Legal Situation

Another consideration in assessing China is the country's evolving legal situation. Because China is an authoritarian state ruled by the CCP, and considering its continued adherence to rule *by* law rather than rule *of* law (the former meaning that laws are tools of the governing elite, rather than rules that hold the government in check), it might seem paradoxical that China's legal situation should be a focus for Western analysts.

However, because of foreign investments in China, as well as Chinese investments abroad, one cannot ignore China's creation of laws and regulations. In the first place, the legal code affects how the Chinese interface with foreign entities, especially corporations. China's legal structure is better developed in the realm of commercial law, precisely because large numbers of Chinese and foreign companies interact both in the PRC and abroad.

In addition, China's rule-by-law society creates a legal scaffolding to justify various other political maneuvers. For example, China has passed a range of laws, including the National Security Law, National Intelligence Law, and Cybersecurity Law, to justify accessing a variety of data from both Chinese and foreign corporate entities. The Chinese government does so not by fiat, but by referencing these various laws. The development and enforcement of laws are further necessary to understand the country's tightening enforcement environment. An understanding of these laws can provide indications of Chinese interests and thinking.

Finally, China's doctrine on "legal warfare" (*falu zhan*, 法律战) means that its approach to the law includes a security component that is not necessarily paralleled elsewhere. This is especially true in the use of legal warfare against external adversaries, which incorporates its approach to

international legal bodies such as the International Court of Justice and the Permanent Court of Arbitration, its interpretation of international and domestic law, and its interactions with international law enforcement bodies, such as Interpol. Legal warfare is also applied against domestic enemies, however, and domestic law, law enforcement agencies, courts, regulations, and legal proceedings (such as extradition) are consequently an important part of its domestic policy.

Tools of Governance

Because of the pervasive nature of the CCP, an understanding of Chinese politics requires an understanding of the various tools of governance available to the CCP. This includes the blunt instruments of the security services, such as the Ministry of Public Security and Ministry of State Security. It also includes the tools of information management, such as the CCP's Central Propaganda Department, as well as the government-run media.

Because of the explosive growth of social media in China and the exclusion of Western social media like Facebook and Twitter, insights into Chinese politics require a better understanding of the Chinese information environment than is required for understanding other countries. Consequently, it is important to examine and monitor developments in the Chinese portion of the Internet, which is a different environment from the Western or Russian cyber realms. This also makes the head of the Cyberspace Administration of China and associated ministries and entities key parts of the Chinese political landscape.

China has pioneered the establishment of a social credit system to control its businesses, officials, and the general public. Social credit ties together financial, regulatory, and social data and creates a series of blacklists that magnify the cost of noncompliant behavior. If an individual or organization is blacklisted by one government body, all participating bodies agree to sanction the individual or organization. The philosophy behind social credit is to create an atmosphere in which the rewards associated with good behavior (such as new opportunities in areas like jobs mobility) and the intensified punishments associated with poor behavior (such as prohibitions on rail or air

travel or on sending one's children to a private school) will compel individuals and organizations to comply with laws and regulations of their own volition. While social credit remains a work in progress and is more advanced in relation to corporations than citizens, the data collected under this scheme will give the government considerable visibility into the lives of its citizens.

Why Transparency on China's Politics and Law Is Important

In approaching the People's Republic of China, it is essential to understand how the PRC operates at the political level. China's domestic politics have a significant impact on its foreign policy and vice versa. Furthermore, given the holistic, comprehensive approach that China takes toward accumulating "comprehensive national power," its political activities overlap with its economic, diplomatic, and military actions. Grasping China's objectives and restraints therefore requires understanding the organization and internal dynamics of both the Chinese Communist Party and the Chinese state, including the relative rankings of individuals in terms of both the state and party hierarchies and their relationship to businesses, the military, and other entities.

Official Data from China

To provide insight into Chinese developments, the PRC's State Council Information Office publishes a variety of white papers. Some of these are produced regularly, such as Chinese defense white papers, which have been produced roughly biennially for more than two decades. Others, such as white papers on religious freedom, poverty reduction, and Arctic policy, appear to have been one-off reports. The various white papers provide the single-most authoritative position on Chinese policies on a given subject. The white paper production process requires bureaucratic reconciliation and agreement before publication and therefore represents the PRC government's consensus view on a subject.

Another authoritative source of information is the government work report presented by the premier during the annual National People's Congress full session (usually held in March), which outlines the government's accomplishments of

the previous year and priorities for the year ahead. Similar reports are presented each year by provincial and administrative governments. While these reports tend to be high level, additional granularity is found in the annual reports and periodic statements and press releases from various Chinese ministries at both the national and provincial or municipal levels.

The most authoritative outline of CCP priorities is provided every five years during the CCP Party Congress. The general secretary of the party, currently Xi Jinping, presents a party work report similar to the government's report presented each year by the premier. These reports provide important glimpses into both the official appraisal of the preceding five years, as well as the direction the party plans to bring China in the coming five years and beyond and what the leadership perceives as the greatest challenges to achieving their objectives.

Another important source of political insight is the five-year plan. Despite shifts away from centralized economic planning in recent decades, the PRC government continues to spearhead development initiatives and use available tools to direct many aspects of the economy. These plans also serve as indicators of key priorities and national efforts. The overall five-year plan also sets guidelines and boundaries for subsidiary five-year plans (for example, within each ministry). Both the overall five-year plan and ministry-specific five-year plans also feed into other Chinese planning such as medium-term and long-term plans in aspects of science and technology.

Providing additional information are reports, laws, and drafts. Some of these documents are released in conjunction with the annual meetings of the National People's Congress. These set economic targets (usually in line with the five-year plan) as well as key legislation and major decisions on a variety of topics. Other Chinese plans and projects, such as "Made in China 2025" and "China Standards 2035," provide further detail on Chinese objectives.

Private Efforts

A wide variety of groups are monitoring various aspects of Chinese political developments, exploiting some of the various data sources noted

above. The following is only a sampling and is by no means exhaustive. This list does not include the various researchers at universities and think tanks that regularly conduct research on aspects of Chinese politics.

- **China Digital Times.** China Digital Times³⁹⁰ began as a blog tracking China’s censorship of its media, but it has become a broader media organization that attempts to break through the censorship to report on developments in the PRC. This includes providing translations of various Chinese websites and electronic discussions, highlighting Chinese censorship directives, and providing translations and analysis of symbols and metaphors used in Chinese discourse.
- **China Leadership Monitor.** Originally housed at the Hoover Institution on War, Revolution, and Peace at Stanford University and now edited by Minxin Pei of Claremont McKenna College, this electronic journal³⁹¹ provides in-depth analyses of developments throughout the Chinese leadership structure, from the provincial and local levels to the national level.
- **Center for Advanced China Research.** The Center for Advanced China Research³⁹² (CACR) conducts Chinese-language research on China’s domestic politics, foreign affairs, and security policy. The CACR publishes an annual report under its Party Watch Initiative that seeks to answer carefully selected questions on trends within the Chinese Communist Party regime.
- **Paulson Institute MacroPolo: The Committee.** This MacroPolo digital project³⁹³ is an interactive database of biographic data on all members of the CCP Central Committee. This allows analysts to view where various CCP Central Committee members have served and identify periods of overlapping careers—a key part of identifying potential factional networks.
- **NPC Observer.** The NPC Observer³⁹⁴ is a blog that focuses on the activities of China’s national legislative bodies: the National People’s Congress and the NPC Standing Committee.
- **Polish Institute of International Affairs.** Based in Warsaw, Poland, the Polish Institute of International Affairs³⁹⁵ (PISM) publishes research on Chinese political discourse on various issues from Chinese-language sources.
- **University of California–San Diego China Data Lab: CCP Elite Portal.** The University of California–San Diego’s China Data Lab³⁹⁶ maintains the CCP Elite Portal, which provides users with a visualization of key characteristics of some 1,700 members of the CCP’s elite who were active government officials at the time of the 18th (2012) and 19th (2017) CCP Central Committees.
- **Asia Society Policy Institute: Decoding Chinese Politics.** This digital product³⁹⁷ provides biographical data on China’s top 34 party and government leaders, as well as a visual displaying their connections to each other. While currently under development, the ASPI plans to expand its data offerings to include specific policy areas, including foreign affairs, military, and technology.
- **Mercator Institute for China Studies.** This German think tank³⁹⁸ publishes in-depth research on domestic political and economic issues and regulatory developments in China, many of which are based in large part on Chinese primary sources.
- **Paul Tsai China Center, Yale Law School.** This center at Yale Law School³⁹⁹ maintains multiple databases related to Chinese laws and regulations, public participation, and public interest litigation in the country. It also features in-depth, well-researched studies into the country’s legal and regulatory developments, including challenging issues to understand, such as China’s social credit system.

Assessment

The Chinese government lacks political transparency. Overall party membership is published annually, but there is little information of the makeup besides age. This has gotten worse over time. Government structure is generally well

reported except for leadership of the party's leading groups, which remain secretive in some cases. The activity of the leadership is reported, except for particularly sensitive policy areas. In recent years, transparency in the publication of government decrees, even in economic policies, has worsened.

The one bright spot in China's political transparency is how closely policymaking follows priorities outlined in policy documents such as work reports and five-year plans. The nature of its one-party system enables stronger policy continuity than in multi-party democracies. The most important of these documents are translated into English and other languages, and the quality of translation has improved markedly over the past two decades.

Private efforts, while still beneficial, have not made nearly enough impact on transparency of China's politics. In most cases, access to the data on political issues is guarded by the CCP. If the Chinese government does not publish data, there is little else private effort can gather in the public domain. Therefore, when the CCP does not provide the public with accurate data, other entities are unable to reach the accurate data they need to understand China. This will remain the case unless Beijing implements new regulations to improve ease of access, which does not appear to be on the CCP's agenda.

Trends from 2023

The past 12 months have seen Xi Jinping further consolidate his control over all aspects of Chinese society. He did this first by strengthening his grip on the CCP at the Party Congress in October 2022, and then by enhancing his and the party's control over key government bodies during the annual two sessions in March 2023. While Xi was expected to break precedent by achieving a third term as CCP General Secretary, Central Military Commission Chairman, and PRC President, the extent of his consolidation shocked even the most informed China analysts.

Xi's consolidation of power proceeded despite his and the party's leadership facing a legitimacy crisis in late 2022, caused by the failure and abrupt abandonment of Xi's signature zero-tolerance approach to minimizing the spread of

COVID-19. A year of widespread lockdowns, combined with general concern among educated Chinese regarding the direction Xi is taking the country, resulted in widespread protests in November 2022 that, despite being quickly contained, contributed to the government's decision to scrap most pandemic controls altogether in December. The decision resulted in hundreds of millions of infections, with large numbers of hospitalizations and deaths, exposing the dysfunction of a regime that squandered nearly three years of time it could have used to bolster China's healthcare infrastructure and ensure its most vulnerable populations—such as the elderly—were vaccinated. Nevertheless, Xi and his allies weathered the political storm well, and by March Xi had emerged stronger than ever.

A discussion of the two most important political trends of the past 12 months follows. Neither of these trends is new—they have been the dominant trends since Xi came to power in 2012—but the changes have been more rapid in the past two years.

Xi's Consolidation of Power. Xi's consolidation began even before he assumed the party's top leadership posts in 2012, and it has proceeded steadily since then. It accelerated in the year leading up to the Party Congress in October 2022.

In November 2021, the CCP released a new historical resolution, the third such document in the party's 100-year history, which placed Xi firmly at the head of a new era, like Mao Zedong and Deng Xiaoping before him.⁴⁰⁰ Despite Xi's having led the party for just nine years at the time of its passage, the majority of the historical resolution focuses on Xi's "new era." The resolution mentions Mao 18 times, Deng 6 times, Deng's successor Jiang Zemin and Xi's immediate predecessor Hu Jintao just once each, and Xi 23 times.

In fact, while paying tribute to the accomplishments of each of the previous leaders, the resolution clearly places Xi on a pedestal next to Mao, bunching the other three leaders together in a shared era of "reform and opening." The resolution shows each of the previous two eras as laying the conditions and setting the stage for Xi's advent. This near-deification of a CCP leader is unprecedented in the post-Mao era. It set the ideological conditions for Xi to remain at the party's helm long past the 20th Party Congress.

At the Party Congress in October, Xi Jinping not only was confirmed as CCP general secretary and Central Military Commission chairman for a precedent-breaking third term, he also managed to stack the party's leadership positions with loyalists and, most surprising of all, force his remaining factional rivals into early retirement.

Before the 2022 Party Congress, only three of the seven Politburo Standing Committee members were clear Xi allies, though at least one other—Wang Huning—was seen as being loyal to Xi, as he has been to every supreme leader throughout his career. In the broader Politburo, Xi controlled a clear majority, with allies in 15 of the 25 seats.

Following the Party Congress, six of the seven Standing Committee members are Xi protégés, and the seventh is Wang Huning, who, as discussed, functions as a Xi loyalist. The broader Politburo shrunk to 24 members, 12 of whom are Xi protégés (with Wang Huning added, that number turns to 13, a majority). Of the remaining members, all but two either have a documented history of enthusiastically supporting Xi's leadership and policies or owe their political careers to Xi. This means that at least 22 of the 24 Politburo members have some kind of loyalty to Xi.

Surprisingly, while unofficial party norms around promotion and retirement were generally followed, Xi managed to break perhaps the strongest precedent around leadership appointments by appointing his key ally Li Qiang as premier, rather than one of the existing vice premiers, as has been done every time this position changed hands in the PRC's existence. This appointment was formalized at the two sessions, where Xi allies were installed in most positions of significance.

Tightening Party Control. The second main trend has been a strengthening of the CCP's control over the government, as well as all aspects of Chinese society. At the 19th Party Congress in 2017, Xi famously quipped, "Government, the military, society and schools, north, south, east and west—the party leads them all."⁴⁰¹ The 2021 historical resolution helped consolidate this trend by formally ending Deng Xiaoping's era of "reform and opening" and leaving no question that the "new era"⁴⁰² Xi heralded in 2017 is here to stay.

Xi's work report at the 20th Party Congress in October 2022⁴⁰³—as well as outgoing Premier Li

Keqiang's work report at the annual two sessions in May 2023⁴⁰⁴—clearly spelled out some of the economic, social, and foreign policy challenges facing China. While pragmatic solutions were offered for some challenges, in most cases, the work reports called for a strengthening of party oversight over the policy area in question.

The government restructuring unveiled during the two sessions was less extensive than that which occurred five years earlier. Nevertheless, the bodies that were restructured, along with the new CCP bodies that were created following the two sessions, strengthened the party's influence over three of the most challenging policy areas—finance, technology, and data.⁴⁰⁵ More in-depth discussions of the developments related to these policy areas are presented in the economic and technology sections of this report.

Opportunities for Further Research

As the PRC has become stronger, instead of becoming more transparent, Beijing has become more opaque. In many ways, the CCP has never been transparent. More recently, however, the CCP has tried to discourage analysis of Chinese politics. These efforts range from steadily reducing access to Chinese databases, to discouraging foreign academics and institutions from analyzing sensitive topics such as treatment of the Uyghurs, to openly harassing both domestic and foreign scholars.⁴⁰⁶

This reduction in transparency makes open-source analysis ever more urgent because of the greater need to understand how the Chinese political system is functioning. This need, however, has not led to an increase in academic study of the Chinese political process.

There is a significant unmet demand for more informed analysis of all aspects of Chinese politics. There is plenty of room for more analysts to examine the background of China's top leaders, and official biographical data published by the Chinese government itself set the stage for more detailed research into topics from career trajectories to factional networks.

Similarly, a better understanding of China's top ministries, the interplay between chief executives of state-owned enterprises and the national political leadership, and studies of provincial leadership trends could yield data that enhance our

understanding of the interplay between economics and politics—which differs from that which plays out in the West—and may lead to additional insight into the next generation of Chinese leaders.

In the more immediate term, researchers could contribute substantially to the understanding of contemporary political trends in China by examining publicly available biographical data of leaders beyond the politburo and cabinet to seek understanding of emerging generational divides and to find early indications of factional rivalries among Xi's overlapping relationship networks.

Technology

Defining Technology

Technology in the context of the *2024 China Transparency Report* means information technology and its many components. Technology is a key area that the Chinese Communist Party (CCP) has highlighted in its strategic Made in China 2025 plan.⁴⁰⁷ In recent congressional testimony, Central Intelligence Agency Director Bill Burns noted that “competition and technology is right at the core of our rivalry with an increasingly adversarial Chinese Communist Party and Chinese leadership in the coming years.”⁴⁰⁸

On March 5, 2021, CCP leadership released the 14th Five-Year Plan for the National Economic and Social Development of the People’s Republic of China and the Outline of Long-Term Goals for 2035.⁴⁰⁹ The plan provides a good overview of the critical technologies the CCP is focusing on, such as artificial intelligence (AI), biotechnology, blockchain, neuroscience, quantum computing, and robotics.⁴¹⁰ The People’s Republic of China (PRC) government has also adopted a \$1.6 trillion infrastructure initiative that surges funding and focuses on seven main areas, including 5G communication networks, charging equipment for electrified vehicles, data centers, AI, and the development of an industrial internet for connected factories.⁴¹¹

Finally, when considering how the CCP thinks of technology, one should look to a third CCP plan, *China Standards 2035*, which is an ambitious 15-year blueprint to shape the global standards for the next generation of technologies such as the Internet of Things, cloud computing, big data, 5G, and AI.⁴¹²

All these technologies are shaping a global race to determine who will lead the information age in the future—authoritarian regimes such as China and Russia, or the democracies found in the West and the Indo-Pacific. This chapter will examine various research initiatives dedicated to tracking Chinese investment in the aforementioned technology areas, PRC talent programs, research and development (R&D), and technology transfer.⁴¹³

Why Transparency on China’s Technology Is Important

As leading global economies become increasingly information- and innovation-based, the importance of technology increases exponentially. The very reliance on technology provides those nations whose industries have mastered it with increased influence, leverage—and potential for espionage or even sabotage. If the economy of the future is a data-centric, information-based innovation economy, the nations whose industries

have built the infrastructure controlling the data flows (5G and beyond), written the software code performing critical functions (software and firmware), and designed the microelectronics that make it all work will hold a powerful perch in the international order.

CCP leadership, including Chinese General Secretary Xi Jinping, sees information technology as a Fourth Industrial Revolution, where heated competition now will determine who leads into the future. Xi has said that “a new round of technological revolution and industrial change—artificial intelligence, big data, quantum information, and biotechnology—are gathering strength.”⁴¹⁴ He indicated that these “earth-shaking changes” would provide an “important opportunity to promote leapfrog development” whereby China could assume a dominant position globally, replacing the United States.⁴¹⁵

CCP leadership is using technology to influence geopolitics similar to how Russia uses oil and natural gas—as a blunt instrument to compel compliance. As with the Belt and Road Initiative, the geotech strategy—to condition technology exchanges to those nations who closely toe the CCP line—has ensnared allies and foes alike while alienating others and pushing them away from Beijing. Reliance on critical technologies from untrustworthy providers creates major global national and economic security risks, unlike reliance in other areas.⁴¹⁶

Official Data from China

The Chinese government regularly reports on national expenditures of R&D funding in science and technology, primarily through its National Bureau of Statistics (NBS), Ministry of Science and Technology, Ministry of Commerce, Ministry of Industry and Information Technology and its Ministry of Education.

As with most of the official figures proffered publicly by the PRC, these statistics almost certainly do not tell the whole story. As explained later in this chapter, official government statistics merely show how much the central Chinese government ministries spend—or at least as much as they are willing to acknowledge. The statistics do not include how much has been allocated in these areas by the individual provinces, prefectures, or

districts. Further, CCP-sanctioned data do not include a clear breakout of PRC investments in the major public–private funds that steer technology research, development, and commercialization such as Chinese Government Guidance Funds.⁴¹⁷

Further, much of Chinese R&D—as well as the state-sponsored cyber and human-enabled espionage campaign to acquire technology—is not easily identifiable and likely in a “black” or classified budget that would not be found in public data.

Chinese State Council

The Chinese State Council is the country’s primary administrative authority. It includes 26 departments, 21 ministries, three national commissions, the National Audit Office, and the People’s Bank of China.⁴¹⁸ For the 2022 budget, the ministries below showed the following budget figures from officially released data:

- **Ministry of Education.** The Ministry of Education⁴¹⁹ is the largest budget item under the Chinese State Council. It includes every aspect of early childhood education and all higher education. Further, it includes funding for the CCP talent and scholars programs, which experts believe include robust efforts to illegitimately acquire sensitive technologies and innovations overseas and bring them back to China to advance the national priorities of the CCP. **2022 Budget: \$82.4 billion**
- **Ministry of Industry and Information Technology.** The Ministry of Industry and Information Technology⁴²⁰ includes funding for science, technology, and industrialization. It coordinates and funds the vast array of PRC-led military–civil fusion efforts across the government and private sector. **2022 Budget: \$13.2 billion**
- **Ministry of Science and Technology.** The Ministry of Science and Technology⁴²¹ includes funding for 260 state research laboratories. The ministry also tracks international technology progress and tries to persuade overseas Chinese national scientists to return to China. **2022 Budget: \$8.5 billion**

National Bureau of Statistics

The NBS issues an annual Communiqué on National Expenditures on Science and Technology. It breaks out the type of R&D that was funded, the province or location where the research occurred, the dollar amount, and how it compared with recent years.⁴²² The most recent numbers issued by the NBS show a record figure of \$378 billion for broad R&D funding, a 12.5 percent increase over the previous year—more than the total R&D funding United States federal government, which was \$123 billion in federal dollars for 2019. (The American private sector accounted for \$394 billion.)⁴²³

A desire to improve the domestic capacity for advanced technologies is not a new one. In 1986, the PRC launched the 863 Program, which infused \$200 billion in spending over 30 years in biotechnology, space, information technology, laser technology, automation, energy, and new materials. Telecommunications and marine technology were added in 1996. Though the program concluded in 2016, its legacy lives on in PRC planning.⁴²⁴

Private Transparency Efforts

As China has entered the international stage as a global technology leader in the past 15 years with national champions such as Huawei, Alibaba, and Tencent, international global attention has expanded beyond the PRC's government-sponsored technology funding. Growing attention has been paid to private Chinese companies (such as those listed above) that engage in R&D, but that the PRC government has access to.

To supplement incomplete official reporting, prominent think tanks around the world have created research projects dedicated to tracking this public and private funding.

Georgetown University Center for Security and Emerging Technology. The Georgetown University Center for Security and Emerging Technology⁴²⁵ (CSET) hosts a team of data scientists within the Walsh School of Foreign Service to track PRC funding in science and technology. Scholars sift through publicly available budget data from dozens of official government entities, often in original-language source documents. This project is dedicated to providing a much-more holistic picture of the state-sponsored funding of advanced technology

R&D in greater depth and detail than is provided in officially sanctioned PRC data.

CSET focuses on the foundations of AI, including people, data, and computational power. It also looks at how AI is used in national security and biotechnology. CSET also maintains a Chinese Talent Program Tracker, which is a catalog of CCP-sponsored initiatives to cultivate China's domestic talent pool in support of China's strategic civilian and military goals.⁴²⁶ CSET researchers have identified 43 national-level talent programs and more than 200 talent programs at sub-national levels, and the numbers continue to trend upward.

The center also maintains the Chinese State Council Budget Tracker, a repository of financial information published by the Chinese government on the State Council's 2019 budget.⁴²⁷ The State Council directly controls the country's 26 cabinet-level departments (and ministries) and dozens of smaller offices, including those critical to science, technology, and talent recruitment.

CSET has done groundbreaking research tracking Chinese government "guidance funds."⁴²⁸ The PRC has set up over 1,700 guidance funds with the stated purpose to "catch up with and surpass" the United States in advanced technologies through advanced R&D and commercialization. These guidance funds are further industrial policy tools the CCP uses to further its geotech strategy. According to CSET, the funds have currently raised over \$672 billion in public and private money. Though fraught with their own troubles, guidance funds are a critical component of the CCP's grand plans to no longer rely on the West for technology, but to become self-sufficient.

Brookings Global China Project. The Brookings Institution's Global China Project⁴²⁹ tracks the PRC's talent development programs. These efforts are multi-faceted.

First, the PRC seeks legitimate exchange of talent and knowledge globally. Second, it seeks to persuade overseas Chinese experts to return to the PRC to assist domestic advancements. Third, it seeks foreign talent to supplement, teach, and train domestic experts. CCP leadership puts a strong emphasis on future technologies as it seeks to leapfrog other global leaders in current technology while better controlling its

population and conditioning future trade for its technology imports on acquiescence to the CCP global political agenda.

The CCP believes that access to high-skilled labor is an impediment to achieving the goals listed above. Since 2012, Brookings found that the China Scholarship Council has more than doubled the number of study-abroad scholarships that require a return to China. China has also worked to attract foreign students in nations where China is looking to build closer relations, such as those nations who have signed onto China's Belt and Road Initiative. Since 2008, the PRC has increased its international scholarships available to study in China from 225,000 to 492,000.

Stanford–New America DigiChina Project. The DigiChina Project⁴³⁰ is a collaborative effort between New America and the Freeman Spogli Institute's Cyber Policy Center at Stanford University. It seeks to understand China's digital policy developments, primarily through translating and analyzing Chinese-language sources. It focuses on data governance, AI, internet law, and technology in geopolitics.

The DigiChina Project has recently focused on how U.S. government efforts to globally restrict Chinese technology giants (such as Huawei and ZTE) have increased the urgency of the CCP's efforts to become technologically independent. DigiChina extensively tracks China's pursuit of advanced technologies, particularly AI. Among other insights, the project found a clear-eyed assessment of where the PRC is in its AI development, including deficient areas such as basic R&D and a lack of domestic operating systems or advanced semiconductor production. The project leaves no doubt as to the importance of domestic AI advancement as a top priority of CCP leadership.

Institute for Defense Analyses Science and Technology Policy Institute. The Institute for Defense Analyses' (IDA's) Science and Technology Policy Institute⁴³¹ (STPI) is a federally funded R&D center operated by the IDA, which is a nonprofit corporation. The STPI was created and is funded by Congress to inform policy decisions of the Office of Science and Technology Policy in the White House.

The STPI provides in-depth tracking of Chinese government spending on such technology areas as AI. One report on China's AI spending found

\$138 million in Chinese non-defense AI R&D expenditures in 2018.⁴³² That number is comparable to U.S. spending in the same category. Other publicly available spending data shed light on the Chinese commercial space sector and Chinese supercomputing efforts.

McKinsey Global Institute. The McKinsey Global Institute⁴³³ is a private think tank established in 1990 to develop a deeper understanding of the evolving global economy. Its stated mission is "to provide a fact base to aid decision making on the economic and business issues most critical to the world's companies and policy leaders."⁴³⁴

McKinsey's Asia–Pacific research includes analysis on China's existing and future tech workforce, technology, and capital flows in and out of China, and China's role in the next phase of globalization—which is highly targeted to technology. McKinsey takes a data-focused business approach to tracking PRC spending in critical areas such as R&D and commercialization of advanced technologies.

IISS–MERICS China Global Security Tracker. The International Institute for Strategic Studies (IISS), a London-based think tank, maintains a China Global Security Tracker⁴³⁵ in collaboration with the German Mercator Institute for China Studies (MERICS). The focus of the tracker is China's defense and security policies.

In biannual reports, the China Global Security Tracker has examined PRC forced technology transfer from European firms and highlighted European policy and structural weaknesses in competing with the Chinese on technology.

Australian Strategic Policy Institute International Cyber Policy Centre. The Australian Strategic Policy Institute⁴³⁶ (ASPI) is an Australian research institution focusing on defense and security issues in the Indo–Pacific theater. The ASPI maintains the world-class International Cyber Policy Centre, which focuses on cybersecurity and emerging and critical technologies, among other topics. The center's data-driven, collaborative research and training examine China's military-related universities; provide an extensive mapping of China's domestic technology giants; and provide updates on the cyber, defense, and space spending in the region. The ASPI's Mapping China's Tech Giants is a database that tracks the global expansion of 27 key Chinese technology companies.⁴³⁷ The database

covers major points of overseas presence including 5G initiatives, smart cities, research partnerships, submarine cables, significant telecommunications and technology projects, and foreign investments.

Center for International Governance Innovation. The Center for International Governance Innovation's⁴³⁸ (CIGI's) China program closely tracks China's forced technology transfers from the private sector to the PRC. The CIGI, based in Ottawa, is an independent, nonpartisan think tank that has received support from the government of Canada.⁴³⁹

One CIGI scholar, Anton Malkin, believes that Beijing is not pursuing a deliberate strategy of technology transfer: Instead, he suggests that such "strategy" is the result of a loose, uncoordinated web of local corruption, legitimate transactions, and a poor regulatory and legal framework. Malkin nonetheless does acknowledge industrial subsidies, talent poaching, and some level of trade secret theft.⁴⁴⁰ Malkin's writings prove that even in a framing favorable to the PRC, major systemic technology transfers have taken place in recent decades—and continue largely unabated. Even if this were not a "strategy," the trend is unquestionable and highly concerning for global trade and safeguarding Americans' intellectual property.

Information Technology and Innovation Foundation. The Information Technology and Innovation Foundation⁴⁴¹ (ITIF) was founded in 2006 as an independent 501(c)(3) nonprofit, nonpartisan research and educational institute. The ITIF focuses on critical issues at the intersection of technological innovation and public policy—including economic issues related to innovation, productivity, and competitiveness.

In an article for the Hamilton Center on Industrial Strategy, Ian Clay and Robert Atkinson highlight China's ongoing efforts to overtake the United States in innovation capacity. They conclude that China's innovation and advanced-industry capabilities are closing the gap—and, by some metrics, surpassing—the United States, and that China is positioned to overtake the U.S. in both proportional and absolute terms.⁴⁴² These advancements have aided the CCP in areas such as national security and commercial applications of AI, and position China's researchers for greater returns on future R&D investments.

Assessment

There are severe gaps in the data provided by the Chinese government regarding technology. On one hand, the Chinese government's research activities are not that secretive. It publishes information about major R&D projects hosted at State Key Laboratories and supported by the National Natural Science Foundation of China (NSFC). Chinese scientific literature and patent information is generally available, which further the PRC's interest in establishing China as a leader in technology.

Nonetheless, because they do not need to attract private sector sponsors, China's state-backed research institutions generally do not publish as much information about their activities as those in more democratic countries. Moreover, many projects financed by the NSFC in 2020 were not disclosed publicly, and little, if anything, is known about them.

On the other hand, technology transfer is not transparent. The Chinese state supports predatory investment practices and clandestine intelligence-gathering operations to monitor and absorb foreign breakthroughs in science and technology. The Chinese government was previously more transparent on its talent programs, but has regressed considerably.

The PRC is somewhat transparent about its budgeting and expenditure. Most local government and CCP offices (at the provincial level and below) publish information about their annual budgets and expense reports. Yet this is changing with time, as Chinese internet companies are beginning to block foreign access to such information. The PRC does not publish any information about the budgets of central-level CCP offices, and little is known about the budget of the central CCP committee.

Private efforts have been instrumental in improving overall transparency regarding technology. Through painstaking work, these efforts have been able to piece together some surviving information about major talent programs during the past decade. But more recent major plans, including the National High-End Foreign Expert Recruitment Plan,⁴⁴³ are still largely opaque. No information is being published about award winners.

Private efforts to compile information about China's science- and technology-gathering

operation have been met with some success in recent years. Private efforts to compile and analyze public budget documents have shed more light on the Chinese government’s priorities. Transparency on the Chinese government’s surveillance technology deployment has also improved as a result of private efforts.

Trends from 2023

Trends in PRC state-backed technological development are clear: Beijing seeks independence from the West on technology and looks to become an exporter of technology and standards governing technological deployment. Not only has this desire been manifested in China’s actions trending during the past two decades, but it is also outlined in its numerous state-issued grand strategies on the topic.⁴⁴⁴

CCP leadership seeks this independence for several reasons.⁴⁴⁵

- First, it seeks to reduce its dependency on what it correctly realizes are nations with which it will increasingly be at odds in the coming decades, such as the United States.
- Second, it seeks to reduce the opportunity that the PRC could unknowingly be introducing software and hardware into their own systems and supply chains that adversaries could use to disrupt their communications or collect intelligence or conduct espionage.
- Third, CCP leadership can use advances in domestic technologies for mass domestic surveillance to further control its own population, track or limit dissent, and target internal minority populations of concern to the regime, such as the Uighurs or Falun Gong.
- Fourth, as China becomes its own technological powerhouse, it can export technology to compel acquiescence to the PRC agenda, track overseas Chinese dissidents, or export the Chinese authoritarian governance model.
- And fifth, as it perfects its own domestic surveillance, China can use those tools to target foreign adversaries and potential allies alike

more broadly and effectively for mass surveillance to conduct espionage, disruption operations, launch cyberattacks, and traffic of personally identifiable information on billions of people.⁴⁴⁶

The trend here no doubt is to create a focused, whole-of-society approach to achieve the goal. As identified in the official and unofficial data—as well as the stated CCP strategies such as Made in China 2025 and in the 14th Five-Year Plan—the PRC is in the process of attempting to leapfrog its geopolitical competitors technologically.

As with most of the PRC’s industrial policies, the efforts include theft of trade secrets and innovation through human and cyber-enabled espionage; legitimate foreign technology acquisition via investment and joint ventures; forced technology transfers; massive influx of state R&D dollars; targeted education and talent programs to support the national technology strategies, endless lines of credit to Chinese-based “national champions” such as Huawei and Hikvision; captured markets and illegal subsidies for those national champions; quotas and difficult market entry rules for the national champions’ competitors; and flooding the global market to bankrupt national champion competitors and to increase national champions’ global market share.⁴⁴⁷

Finally, the CCP’s efforts to shape the digital information environment extend well beyond its borders. China has expanded its surveillance capabilities and ability to conduct influence operations via commercial digital platforms in foreign countries. Platforms like TikTok provide the CCP with a powerful tool for shaping narratives and collecting data within the United States.⁴⁴⁸ For instance, TikTok’s parent company, ByteDance, has actively promoted content aligned with the CCP’s interests on the platform, censored opposing viewpoints, and gathered user data to facilitate tailored influence campaigns.⁴⁴⁹ This threat is amplified by TikTok’s rapidly growing userbase, with the percentage of American adults getting news from the app nearly tripling from 3 percent in 2020 to 10 percent in 2022.⁴⁵⁰

Notably, nearly one-quarter of U.S. adults under 30 now regularly consume news on TikTok.⁴⁵¹ This surge in TikTok’s popularity has resulted in the

platform outpacing many American counterparts in terms of screen time,⁴⁵² solidifying its role as a dominant force in shaping the digital landscape and giving China unprecedented access to shape perceptions, particularly among the younger demographic in the U.S. By harnessing TikTok’s influential algorithm to amplify favored content while limiting the visibility of unfavorable topics, the CCP can subtly manipulate narratives and introduce pro-CCP biases while blocking potential criticisms.⁴⁵³

Opportunities for Further Research

Defense and Security Spending. By far the biggest challenge in understanding China’s technological development plans is the lack of detailed visibility into the PRC’s largest budget items—its defense and state security spending. While some U.S.-based and international think tanks do a decent job of estimating how much the CCP allocates to its military, intelligence, and vast domestic security services based on output and the broad figures released, it is difficult (if not impossible) for an open-source estimate of how much is spent that is unseen—namely R&D for advanced technologies.

Clearly, many AI, robotics, information technology, quantum computing, autonomous vehicles, and other technologies have military, police, and intelligence applications. Resources are clearly being poured into developing these technologies from the PRC’s “black budget” (in addition to what is being published in its open-source reporting). How much is spent “off books” is unclear and very difficult to ascertain.

Further, the PRC has clearly maintained an intense focus on developing domestic technologies to track, surveil, and suppress its own population, such as the social credit score, mass surveillance, facial recognition, and the Great Firewall of China, among other tools. The R&D of most of these technologies would have been perfected as part of the unseen budget of the Ministry of State Security.

Domestic Impact. Second, there is little data or research available on the holistic domestic impact for the PRC’s two-decades-long master plan to conduct human and cyber-enabled espionage to acquire advanced technologies, sophisticated R&D, or even the intellectual property of commercially available technologies. Due to media reports, congressional investigations, prosecutions, and other legal actions, there is some sense of what technologies have been stolen from the United States and other advanced nations. In nations that do not have those institutions in place, however, the scope of the problem is not as well known.

The CCP leadership has cast a vast net, and no region of the world has been spared. Couple this with the same time period of forced technology transfers for foreign companies to access the Chinese market, and the impact of the PRC’s domestic technical know-how is surely substantial. How does this interplay with Beijing’s plans to guarantee domestic market share for national champions? How do “private” companies in China deconflict this stolen IP into their own legitimate R&D efforts? Exactly how much of a leg up has this given them?

Private Sector Research and Development.

Finally, there is a growing body of private sector R&D occurring in China that is more difficult to measure. The CSET at Georgetown has done a masterful job of tracking and explaining the use of Chinese government guidance funds, but what about the myriad of other private R&D taking place by startups or technology giants themselves? Some “private” Chinese companies such as Huawei do declare their R&D spending (though the accuracy is questionable), while many more do not. What industries are leading private R&D efforts? Is it government backed or directed? Is it leading to commercial success in the global market? How successful are PRC-led commercialization efforts? And what advantages has this given the PRC over its competitors?

“Exert a Crushing Blow”: Beijing’s Strategy of Gradual Genocide in Xinjiang

ADRIAN ZENZ, PHD

This essay examines the leadership and intent behind the People’s Republic of China’s (PRC’s) policies of mass internment and draconian birth prevention measures in its northwestern Xinjiang Uyghur Autonomous Region. Based on new evidence from classified internal state documents, this essay argues that Beijing is intent on targeting Uyghurs and other ethnic groups in ways that constitute a gradually unfolding genocide.

The Xinjiang Papers

In April 2014, General Secretary Xi Jinping visited Xinjiang, and one month later, the Chinese Communist Party (CCP) convened the Second Central Xinjiang Work Forum. Top-secret speeches were leaked to *The New York Times* and the British *Uyghur Tribunal*. These speeches were dubbed the “Xinjiang Papers,” and in them, Xi argued that the achievement of China’s major goals in the 21st century (the “two centennial goals”) were in jeopardy if the situation in southern Xinjiang could not be brought under control.⁴⁵⁴

Xi demanded that the region engage in an all-out battle to “prevent Xinjiang’s violent terrorist activities from spreading to the rest of China.”⁴⁵⁵ Since acts of violent resistance had already spread to other regions of China, he asserted that “[t]herefore we propose that Xinjiang [has

entered] a...painful period of interventionary treatment.”⁴⁵⁶ He further stated:

In the face of rampant violent terrorist activities and frenzied violent terrorists, we must focus our current fight on a severe crackdown on violent terrorist activities. We must not hesitate or waver in the use of the weapons of the people’s democratic dictatorship, and focus our energy on executing a crushing blow that buys us time and initiative for solving the deep-seated issues regarding Xinjiang’s long-term peace and stability.⁴⁵⁷

The extensive linkages between central government statements contained in multiple confidential documents contained in the Xinjiang Papers and the unfolding crackdown in Xinjiang are strengthened by the fact that a set of Xi’s top-secret speeches from April 2014⁴⁵⁸ contains a cover letter from the Xinjiang government from October 2016 that mandates their study. Publicly available evidence, most of which has since been deleted from the Internet, indicates that in late 2016, these documents, as well as three speeches delivered by Xi, Li Keqiang, and Yu Zhengsheng in May 2014 at the Second Central Xinjiang Work

Forum,⁴⁵⁹ were treated as containing the “strategic deployment of the Party Central Committee for Xinjiang work,” and studied as such.⁴⁶⁰

Local government study sessions of this material were held that aimed to “convey and learn the spirit of General Secretary Xi Jinping’s series of important speeches, arrange and deploy current and future key tasks.”⁴⁶¹ In late 2016, these “future key tasks” would have referred to the campaign of mass internment that began in early 2017, alongside other policies, including a dramatic upscaling of boarding schooling, and of forced labor and coercive poverty alleviation.⁴⁶²

Initiating the Campaign of Mass Internment

In August 2016, Tibet’s CCP Secretary Chen Quanguo was brought to Xinjiang.⁴⁶³ It is possible that his appointment was discussed and decided at the Two Sessions in March 2016 in Beijing, at which Xi Jinping, Chen Quanguo, and Chen’s predecessor, Zhang Chunxian, would all have been present.⁴⁶⁴ In an internal state document contained in the so-called Xinjiang Police Files,⁴⁶⁵ Chen admitted that he was “sent” to Xinjiang by Xi himself, on a special mission for the nation: “The General Secretary sent me to Xinjiang...in order to make a stable Xinjiang arise.”⁴⁶⁶

When Chen assumed his new post in Xinjiang in late August 2016, he executed a premeditated plan. He immediately unfurled a rapid series of drastic and large-scale measures, including the construction of extensive surveillance systems and the recruitment of thousands of additional security forces, knowing that he only had about seven months until the mass internments would start.⁴⁶⁷

The Xinjiang Police Files, obtained by a third party from the outside by hacking into computer systems operated by Xinjiang’s Public Security Bureau (PSB), contain transcripts of two internal speeches given by Chen Quanguo in 2017 and 2018. In them, Chen argues that authorities should have opened fire during the 2009 Urumqi Riots, and that if anyone were now to challenge the authorities as was done during that incident, security forces must “decisively attack,”—that is to say, “first kill and then report.”⁴⁶⁸

Chen’s preoccupation with the security of the internment facilities and the stringent measures

surrounding the arrest of those who “should be rounded up” went to considerable extremes. He told police forces to “shoot dead” anyone who even attempted to escape by running a few steps.⁴⁶⁹ When it came to the internment camps, Chen demanded “absolute security” to prevent any incidents or escapes: “No one should ever plan to attack internment facilities, [they have] multiple lines of defense, as soon as there is someone who moves [against them], fire must resolutely be opened [on them].” Chen further argued that once detained, detainees cannot be released, because “once they are let out, problems will [immediately] appear,” and “some may not necessarily have been transformed [re-educated] well even after 3 or 5 years.”⁴⁷⁰

Beijing’s Support for the Mass Internment Campaign

The Xinjiang Police Files also contain, in a “secret document,” the transcript of an internal June 2018 speech by Zhao Kezhi, PRC State Councilor and head of the national PSB.⁴⁷¹ Zhao’s speech offers unprecedented evidence for Xi Jinping’s informed and active role in directing policy in Xinjiang. According to Zhao, Xi’s “important instructions on governing Xinjiang” provided the basis for numerous policy priorities outlined in the speech, including “bringing the Vocational Skills Education and Training Center management work into the orbit of legalization” (i.e., establishing them as legally operating facilities).⁴⁷²

The secret document notes Xi’s concern about overcrowding in Xinjiang’s prisons and camps. After CCP leader Guo Shengkun reported on the prison capacity challenges he witnessed during his visit to Xinjiang in April 2017, Xi himself ordered regional authorities to “implement practical measures such as expanding the number of employed [staff in detention facilities], enlarging the capacity [of these facilities], and increasing investment [in these facilities] within the set time frame.” Zhao suggested that the “success” of the “strike hard” and “de-extremification” campaigns had led, by mid-2018, to “a great number of excess detentions [relative to capacity].”

In fact, Zhao made note of measures taken to relieve the pressure on Xinjiang’s prisons, including bringing police from other parts of China to Xinjiang and transferring Uyghur prisoners from

Xinjiang to other provinces. Zhao assures regional officials that the central government would soon approve funding to construct additional detention centers in southern Xinjiang. He also emphasized that Beijing would “increase the strength of its support” for covering the “high costs” of operating and maintaining Xinjiang’s internment facilities.

Zhao’s speech hinted at the massive scale of the internments, which the author estimates to be between 1 and 2 million people.⁴⁷³ He asserted, “Xinjiang has two million people who have been influenced by pro-Xinjiang independence, pan-Islamist, and pan-Turkist thinking. Southern Xinjiang has more than two million people who have been severely influenced by the infiltration of extremist religious thought.”⁴⁷⁴

“Optimizing” the Ethnic Population Structure

In his May 2014 speech at the Second Forum, Xi had also demanded that birth control policies in southern Xinjiang were to be made “equal for all ethnic groups.”⁴⁷⁵ This statement about birth control “equality” reflects a euphemism that, since 2017, has undergirded policies that drastically reduced birth rates of ethnic groups. Previously, ethnic groups were permitted to have more children and had much higher birth rates than the Han majority. Effectively, the notion of “equality” was weaponized to drastically slash non-Han birth rates, bringing them down to the much lower level of the Han majority. However, in some Uyghur regions, birth rates continued to decline to levels near or below the replacement rate.

To give just one pertinent example, Xinjiang’s Health Commission established a set of performance targets in 2019 for a special initiative funded that employed the same phrase—“implement a birth control policy that is equal for all ethnic groups”—as the stated overall goal behind a new mandate to reduce birth rates in southern Xinjiang by “at least 4 per mille” (per thousand); to provide free birth control surgeries that included female sterilization procedures; and to achieve an adoption rate of “long-term effective birth prevention” measures of at least 90 percent in rural regions. (These measures include intrauterine device [IUD] insertions and sterilization surgeries).⁴⁷⁶

The Xinjiang Papers make a similar demand, namely to “enact birth control policies that are equal for each ethnic group,” yet bluntly adds that this measure is specifically designed to “promote equal population growth for each ethnic group.”⁴⁷⁷ This mandate is in line with recommendations made by numerous Xinjiang academics and experts on population growth and “population optimization,” who have called for precisely such measures.⁴⁷⁸ Xinjiang’s most high-profile voice on this highly sensitive subject is Liu Yilei, Deputy Secretary-General of the CCP committee of Xinjiang’s Production and Construction Corps and a Xinjiang University dean. In 2020, Liu argued “the root of Xinjiang’s social stability problems has not been resolved.”⁴⁷⁹ He added, “The problem in southern Xinjiang is mainly the unbalanced population structure,” and further stated, “Population proportion and population security are important foundations for long-term peace and stability. The proportion of the Han population in southern Xinjiang is too low, less than 15 percent. The problem of demographic imbalance is southern Xinjiang’s core issue.”⁴⁸⁰

Since then, Beijing’s family planning policies in Xinjiang have been draconian. Birth control violations are liable to be punished with internment.⁴⁸¹ By 2019, Xinjiang planned to subject at least 80 percent of women of childbearing age in the rural southern four minority prefectures to intrusive birth prevention surgeries (IUDs or sterilizations).⁴⁸² In 2018, the region performed 243 sterilization procedures per 100,000 of the population, compared to 33 for the entire country.⁴⁸³ In 2019, two counties in Hotan planned to sterilize 14.1 percent and 34.3 percent of all married women of childbearing age under this project.⁴⁸⁴ Between 2015 and 2018, combined natural population growth rates in the four prefectures of southern Xinjiang (Hotan, Kashgar, Aksu, and Kizilsu) declined by 72.9 percent.⁴⁸⁵ In 2019, population rates continued to decline: In several counties, they fell to just above or below zero.⁴⁸⁶

The birth control campaign among the southern Uyghur majority regions has resulted in natural population growth rates near and below zero. This unlikely to be a coincidence, given that goals to “optimize” southern Xinjiang’s ethnic population structure are most realistically achieved within a

growth rate range around or potentially slightly below zero. Over a period of 20 years (2020 to 2040), the estimated population loss from suppressed birth rates in southern Xinjiang ranges between 2.6 and 4.5 million.⁴⁸⁷

Beijing's Intent in Xinjiang

In January 2021, the U.S. government determined that Beijing's actions in Xinjiang constituted genocide.⁴⁸⁸ Several other national parliaments have since followed suit. These determinations were primarily⁴⁸⁹ based on evidence of systematic suppression of births,⁴⁹⁰ since the United Nations' 1948 Convention on the Prevention and Punishment of the Crime of Genocide⁴⁹¹ stipulates the act of "imposing measures intended to prevent births within the group" constitutes an act of genocide if it is "committed with intent to destroy, in whole or in part, a national, ethnical, racial or religious group."

Much of the debate surrounding the classification of China's actions against the Uyghurs in terms of states making a genocide "determination" focuses on the legal question of establishing "genocidal intent." Beijing's intent (both inferred and explicit) behind its actions and policies in Xinjiang is to effectively contain the perceived threat posed by a concentrated, growing and increasingly resistant ethnic population, especially in southern Xinjiang, in order to:

- safeguard China's domestic social stability;
- safeguard China's national security, as perceived by the CCP;
- achieve the politically important Two Centennial Goals; and
- consequently, safeguard the long-term rule of the CCP under the leadership of Xi Jinping.

The significance of Xinjiang-related statements by leading central government officials for an atrocity determination are highly pertinent: If a systematic attack against a civilian population is

carried out as part of a long-term strategy pursued by the central government in Beijing, and if that strategy is of paramount importance to China's national security, then it is very likely that related policies (and the resulting human rights violations) will be systematically and rigorously pursued into the long-term—until stated or implied goals are reached.

The available evidence provides crucial information regarding the nature and intensity of the Chinese government's intent regarding its actions in Xinjiang. It underscores prior arguments that the systematic prevention of births among Uyghurs and other ethnic groups is a critical and necessary part of China's overall "optimization" policy in Xinjiang—a policy that is considered a matter of national security. Empirically, the potential non-birth of up to 2.6 million non-Han ethnic people (according to the lowest-estimate scenario) who would otherwise have been born but for the birth prevention measures enacted by the Chinese party-state, represents at least 20 percent of southern Xinjiang's ethnic population of 9.49 million in 2018, with the high estimate resulting in a growth curtailment of population by roughly one-third.

These non-births comprise a physical "destruction in part," whose impact must be considered in tandem with other measures, notably the targeted attack on religious, cultural, and economic elites; the separation of children from parents, along with a breaking apart of family units; the dismantling of traditional communities; large-scale forced labor; the suppression of language; and the destruction of historical cultural heritage.⁴⁹²

Conclusion

In sum, the available evidence provides states and the international community with significant evidence that a genocide is slowly being carried out. Of particular concern is China's perception of concentrated Uyghur populations as a national security threat. However, even those states that may not share this conclusion cannot deny that, at a minimum, there is a serious risk of genocide.⁴⁹³ States are therefore obligated to act urgently on that knowledge.

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In Sight, Out of Mind: Shortcomings in Safeguarding the U.S. Defense Industrial Base from China

NADIA SCHADLOW, PHD, AND ANDREW J. HARDING

In 2022, for the first time ever, the National Defense Industrial Association gave the health of the defense industrial base (DIB) a failing grade.⁴⁹⁴ It is now well known that the United States' DIB has serious vulnerabilities.

There has been a great deal of attention paid to this issue. For example, a recent report found that U.S. facilities that produce energetics (the critical chemicals filled with energy needed for explosives, propellants, and pyrotechnics) lack surge capacity and are unable to deploy advanced energetics at the levels of American adversaries.⁴⁹⁵ Another report assessed that the U.S. lacks the capability to produce and refine many critical minerals, such as cobalt and lithium, needed for lithium-ion batteries.⁴⁹⁶ These vulnerabilities are made worse by the People's Republic of China's (PRC's) malign behaviors that create and exploit vulnerabilities in the U.S. DIB.

What is less appreciated, however, is that many of these problems in the DIB are not new. For nearly three decades, Congress has mandated that the Department of Defense (DOD) produce an annual *Industrial Capabilities Report* (ICR) to Congress.⁴⁹⁷ The annual report “summarizes the Department’s industrial capabilities-related guidance, assessments, and mitigation actions.”⁴⁹⁸ In other words, the purpose of the congressionally

mandated report is to ask the Defense Department to assess its vulnerabilities in the DIB.

The authors' assessment of these annual reports, between fiscal years (FY) 2013 and 2021, suggest that the DOD has made minimal progress in implementing or sustaining solutions to mitigate weaknesses and ongoing threats to the DIB. A better understanding of past efforts to address problems in the DIB is needed in order for current efforts to succeed.

Historical Context

Since World War II, Congress has asked for reporting about the industrial base. During the war, critical material shipments were disrupted, spurring the federal government to consider the health of the U.S. industrial base.⁴⁹⁹ Notable pieces of legislation lay the groundwork for industrial base reporting. Section 202 of the National Security Act of 1947 mandated that the Defense Secretary's annual report include an assessment of the state of the DIB.⁵⁰⁰ The Defense Production Act (DPA) of 1950 gave the President authority to obtain information from private industries for industrial base assessments.⁵⁰¹

After the Cold War, Congress grew concerned with the DOD's lack of focus in maintaining a strong DIB to prepare for possible future

conflicts.⁵⁰² In the FY 1993 National Defense Authorization Act (NDAA), Congress established the National Technology and Industrial Base (NTIB), which included the National Defense Technology and Industrial Base Council, to “support national security objectives of the United States.”⁵⁰³ The NTIB, in collaboration with organizations, federal agencies, and allies, supports policies and partnerships to supply military operations, conduct research and development, secure supply chains, and develop industrial preparedness during wartime.⁵⁰⁴

Since 1997,⁵⁰⁵ DOD has provided an annual report to Congress that summarizes industrial base capabilities, known as ICRs.⁵⁰⁶ The ICR report, which is provided to the Committee on Armed Services of the Senate and the Committee on Armed Services of the House of Representatives by March 1 of each year,⁵⁰⁷ describes DOD’s guidance, assessments, and mitigation actions related to the DIB⁵⁰⁸ to the Committee on Armed Services of the Senate and the Committee on Armed Services of the House of Representatives by March 1 of each year.⁵⁰⁹

There are several other reporting requirements related to the DIB. In 2012, Congress required the DOD to develop a prioritized list of investments to be funded through the DPA’s Title III authorities.⁵¹⁰ Section 852 of the FY 2012 NDAA required a “description of, and a status report on, the sector-by-sector, tier-by-tier assessment of the industrial base.”⁵¹¹

Ten years later, Congress grew concerned about rare earth minerals and supply-chain bottlenecks. U.S. House Report 116–442 accompanied the FY 2021 NDAA, which directed DOD to produce a report on supply chain vulnerabilities for rare earth materials and stockpiling recommendations.⁵¹²

In addition, executive orders related to supply chains have also led to reports on the industrial base.⁵¹³ President Donald Trump’s Executive Order (EO) 13806⁵¹⁴ created an interagency task force that produced a report to “assess risk, identify impacts, and propose recommendations in support of” the industrial base.⁵¹⁵ President Joe Biden’s EO 14017 required multiple reports to be submitted from seven agencies, including DOD.⁵¹⁶ The FY 2021 ICR incorporates DOD’s one-year report mandated by EO 14017.⁵¹⁷

Trends

Before 2013, China is mentioned in the ICRs only episodically and with minimal concern. DOD’s annual ICRs for fiscal years 2013 to 2021 consistently mention China, with concerns increasing over time.

During the past 10 years, annual ICRs regularly identified many of the same problems, some of which related to the growing PRC. Over time, reports began raising alarms regarding China’s market share of printed circuit boards (PCBs) and semiconductors,⁵¹⁸ Chinese foreign direct investment (FDI) into U.S. firms; China’s defense spending and arms exports; China’s increasing proportion of science, technology, engineering, and mathematics (STEM) graduates relative to U.S. STEM graduates; military modernization; battery centralization; economic espionage; space manufacturing; quantum breakthroughs; and biotechnological dominance. ICRs from 2018 to 2020 are the most thorough and in-depth reports that express concern about China’s growing strengths and DIB vulnerabilities.

PCBs and Semiconductors. The most common concerns cited Chinese market shares of PCBs and semiconductors. These concerns are noted in nearly every report. Concerns about China’s large share of rare earth materials and PCBs first appeared in the FY 2014 report; reports that followed contained updates of U.S. reliance on additional supply chains sectors from China, including electric motors and fuselage structures.⁵¹⁹ The DOD noted that it was “increasingly dependent on foreign-sourced PCB products to meet critical military requirements.”⁵²⁰

Since the 2014 ICR, Asia (primarily China) still maintains dominant market share over PCBs. With China now accounting for over 50 percent of global PCB manufacturing, the DOD notes that the U.S. industrial base is “aging, shrinking, and failing” and, as a result, “risks losing visibility into the manufacturing provenance of its products.”⁵²¹ In 2016, the DOD created an “executive agent to focus on this issue,” though it is unclear what, if anything, the executive agent ever recommended.⁵²²

Foreign Direct Investment. The FY 2016 ICR identified the problem of foreign direct investment in the semiconductor market. The report noted that the U.S. was “increasingly strained to effectively

address the national security concerns caused by the changing nature of and rapid increase in FDI from China and other competitor countries.⁵²³

IP Theft and Machine Tools. In the FY 2019, the DOD directly linked China to efforts and investments aimed at obtaining U.S. intellectual property (IP) in key industries, including defense manufacturing.⁵²⁴ These tactics, such as dumping, investments, and IP theft, helped China gain significant advantages in, for example, machine tool production that caused U.S. industries to increasingly rely on foreign machine tools.⁵²⁵ The report also expressed concern about machine tools going to China (increase in exports by \$192 million) rather than the United States (decrease in exports by \$126 million, which “directly threatens U.S. national self-determination in commerce and geopolitics.”⁵²⁶ The report noted that the United States had “lost its formerly pre-eminent position as the world’s leading machine tool consumer, producer, and innovator,” while a “principal adversary effectively cornered the market for critical raw materials.”⁵²⁷

The annual ICRs include multiple mentions of China’s low-cost and permissive regulatory environment as a key factor shaping firms’ decisions to produce parts in China, while firms producing in the U.S. often went out of business. This contributed, for example, to China producing over four times as much casting production as the United States.⁵²⁸ The report also noted that China can produce counterfeit microelectronics and participate in non-market competitive practices, such as government subsidization and—again—IP theft.⁵²⁹

Sole Suppliers. The problem of sole suppliers is also consistently mentioned throughout the ICRs. It is difficult to determine how successful, if at all, the DOD has been in mitigating bottlenecks from sole suppliers. For example, in the 2013–2015 reports, the DOD noted that it would investigate solutions to reduce its dependence on antimony sulfide, an important energetic compound used in over 200 munitions—and effectually controlled by China.⁵³⁰ The DOD then focused efforts on identifying alternative compositions that did not contain antimony sulfide.⁵³¹ In 2015, the DOD stated that it was “undergoing testing” to see if a “potential U.S. source” met military requirements.⁵³² Yet after the last note about this issue, in 2015, there did not seem to be updates in subsequent ICRs. If

the potential U.S. source was successful or a new compound was produced, the public-facing reports have not stated so.⁵³³

The DOD also identified supplier problems for missile energetic materials and found that a Chinese pre-cursor used to make Dechlorane, a component “nearly all DOD missile systems use” as solid rocket motor insulation, which is exclusively sourced in Belgium, could no longer be produced, meaning “there is now no source for Dechlorane in the world.”⁵³⁴ Concerningly, Dechlorane can no longer be produced because the pre-cursor came from China, and the Chinese source could no longer produce the needed pre-cursor.⁵³⁵ In subsequent ICRs, it was unclear if the DOD had found an alternative supplier.

Despite having “three-to-five suppliers” for a component “just a decade ago,” the FY 2020 ICR noted the number of sole-supplier manufacturers to be “staggering,” with China increasingly being the primary supplier of key components for leading technologies used throughout the military.⁵³⁶ For example, the DOD found that one-third of its energetic material is produced overseas, with many materials having “direct dependencies on China.”⁵³⁷ This includes a reliance on Chinese rare earth magnets and metal oxides for various radar and electronic warfare systems. The FY 2021 ICR acknowledges that the U.S. is too reliant on sole-source manufacturers and foreign sources and that it has lost domestic suppliers to foreign markets, particularly China.⁵³⁸ Included is a subsection on China’s dominance of global lithium supply chains needed for batteries—and the DOD expects that its reliance on China will *increase* through 2030.⁵³⁹

STEM Graduates. Additionally, since the FY 2018 ICR, the DOD noted that there is a large—and expanding—gap between U.S. and Chinese STEM graduates. Despite China having only four times the population of the United States, China “produces eight times the number of STEM graduates.”⁵⁴⁰ This gives China an advantage in human capital and investments in its future workforce for decades ahead. The FY 2021 ICR continues to express concern about the lack of STEM graduates.

Assessment and Recommendations

This broad overview of these reports illustrates that the DOD reported many of the same

vulnerabilities year after year, suggesting that the U.S. continues to struggle with how to address them. In fairness, many of the vulnerabilities and threats identified cannot be mitigated by the DOD alone. Developing a more resilient supply chain in areas from semiconductors to critical minerals to munitions will require regulatory and permitting reforms and involves a range of departments, from the Department of Commerce to the Department of Energy.

For example, the Committee on Foreign Investment in the United States, under the Department of the Treasury, will have to play a stronger role in more intense reviews of inbound investments to protect supply chain integrity.⁵⁴¹ Doing so could help mitigate risks posed by Chinese attempts to acquire U.S. suppliers and firms, as well as curtail economic espionage.

Transparency regarding DOD's steps, however, has been poor. A 2022 report from the Government Accountability Office (GAO) found that the annual ICRs "do not include DOD's progress in mitigating its industrial base risks," while DOD has not "consistently communicated information about its progress in mitigating risks in its annual [ICRs]."⁵⁴² In some cases, it is possible or reasonable to believe that the DOD has made progress in securing the DIB but is limited in what it can share publicly. The GAO noted that its "enterprise risk management framework" already takes this concern into account, and the DOD previously provided non-publicly available appendices in the annual ICR to Congress.⁵⁴³

There are no performance measurements: The annual ICR's analysis is primarily qualitative rather than quantitative.⁵⁴⁴ Officials told the GAO that they "plan to improve the usefulness of" the annual ICRs but "have yet to determine whether DOD would provide updates on the implementations of such recommendations in its future reports."⁵⁴⁵ Without this information, a lack of transparency regarding the DOD's progress to safeguard the DIB will continue to hamper real improvements and frustrate policymakers.

In response to the GAO report, the DOD concurred with four separate recommendations calling for the DOD to use "performance measures to monitor the aggregate effectiveness of mitigation efforts," as well as the GAO's recommendation

for the DOD to "report its progress toward mitigating industrial base risks."⁵⁴⁶ The DOD stated that it will "identify the best way to report on [mitigation efforts] progress."⁵⁴⁷ Issuing progress reports, quantitative measurements, and executive orders would serve the DOD well.

Progress Reports. To improve ICR transparency, the DOD should include a progress report section to its annual ICRs. Adding a progress report would allow policymakers and industry to gain awareness and understanding of how the U.S. is responding to identified threats and vulnerabilities. This progress report can take many forms: It could be a component of individual sections or a stand-alone section for the entire ICR. It could also be classified if necessary.

The progress reports could describe the most up-to-date landscape of various sectors and offer updates on the DOD's efforts to address or resolve vulnerabilities. In other words, the DOD would articulate whether a sector outlook improved or worsened from the prior year and what the U.S. is doing in real time to strengthen these sectors, per DOD's prior recommendations. While some updates understandably would be unavailable to the public, progress reports would allow the U.S. to identify and implement proven strategies that improve the DIB and replace unsuccessful strategies. Congress could also mandate a reporting requirement through legislation.

Quantitative Metrics. The DOD would also benefit from adding quantitative metrics to measure progress. These metrics would allow policymakers to set strategies to strengthen sectors and determine their successes. The President, the Secretary of Defense, or Congress could set various goals that should be reached by a certain year and objectively measure annual progress toward these goals.

For example, in the FY 2018 NDAA, Congress set the goal for the U.S. Navy to achieve and maintain 355 ships of certain types and numbers by 2045 as U.S. policy.⁵⁴⁸ However, based on current funding prospects, the Navy expects a fleet between 318 and 322 ships by 2045.⁵⁴⁹ The ability to measure the Navy's progress allows policymakers to make adjustments now that help achieve the goal, as opposed to merely describing the Navy's shipbuilding status on an annual basis. The DIB would benefit from similar

quantitative measurements that could be provided by annual ICRs.

Executive Orders. There have been some positive developments in recent years. The Trump and Biden Administrations have released executive orders intended to address U.S. supply-chain security, and Congress is now more interested in supply-chain legislation.⁵⁵⁰ Vulnerabilities have been identified and assessed more frequently by additional reporting from agencies and new legislative proposals. While “industrial policy” has not always been politically embraced in Washington, the challenge of great-power competition requires consideration of how the federal government and private sector must work together as a core component of modern national security strategy.⁵⁵¹

COVID-19 exposed U.S. reliance on foreign supply chains, namely China, and caused Congress and Americans to take supply chains more

seriously, increasing awareness of the importance of secure supply chains. At a minimum, this expanded awareness increases the chances that Congress or the White House take needed action. Of course, increased awareness means little if it does not translate into measurable progress.

Conclusion

The lack of overall progress, despite nearly a decade of reporting, raises serious concerns about the federal government’s ability to adequately mitigate and eliminate vulnerabilities in the DIB unless there is a shift toward identifying and addressing persistent obstacles. Merely repeating description of vulnerabilities year after year will not deliver the necessary results to reorient America’s defense posture and safeguard American interests.

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Chinese Influence Strategies Are Putting the Pacific Islands on the Front Line—Again

CLEO PASKAL

Understanding China’s strategy toward the Pacific Islands begins with understanding why the Pacific Islands are so important to the People’s Republic of China (PRC). It is the same reason they were important to Imperial Japan: geography. Whoever controls the Pacific Islands, controls the area around them—large sections of the Pacific Ocean—the buffer between Asia and the Americas and the conduit to the Indian Ocean and the poles. This control allows freedom of operations, projection of power, and the monitoring of others nearby.

The U.S. also understood this—a lesson learned in blood during World War II—and it was the motivation for Washington to establish of the Freely Associated States (FAS) arrangement with the Marshall Islands, the Federated States of Micronesia, and the Republic of Palau. With U.S. strategic control of this “corridor of freedom” formed by the three contiguous states of the FAS, the U.S. military can deploy largely unimpeded from Hawaii to Guam and the Commonwealth of Northern Mariana, as well as reach treaty allies in the Western Pacific such as the Philippines and Japan. This east-west corridor underpins and makes possible a strong defensive position along the better known First and Second Island Chains.

Other Pacific Islands form their own strategic barriers/projection corridors. The Solomon

Islands and Papua New Guinea, for example, form part of an island chain off the coast of Australia and are critical for either Australian freedom of movement or interdiction—not to mention lines of communications and supply to the United States.

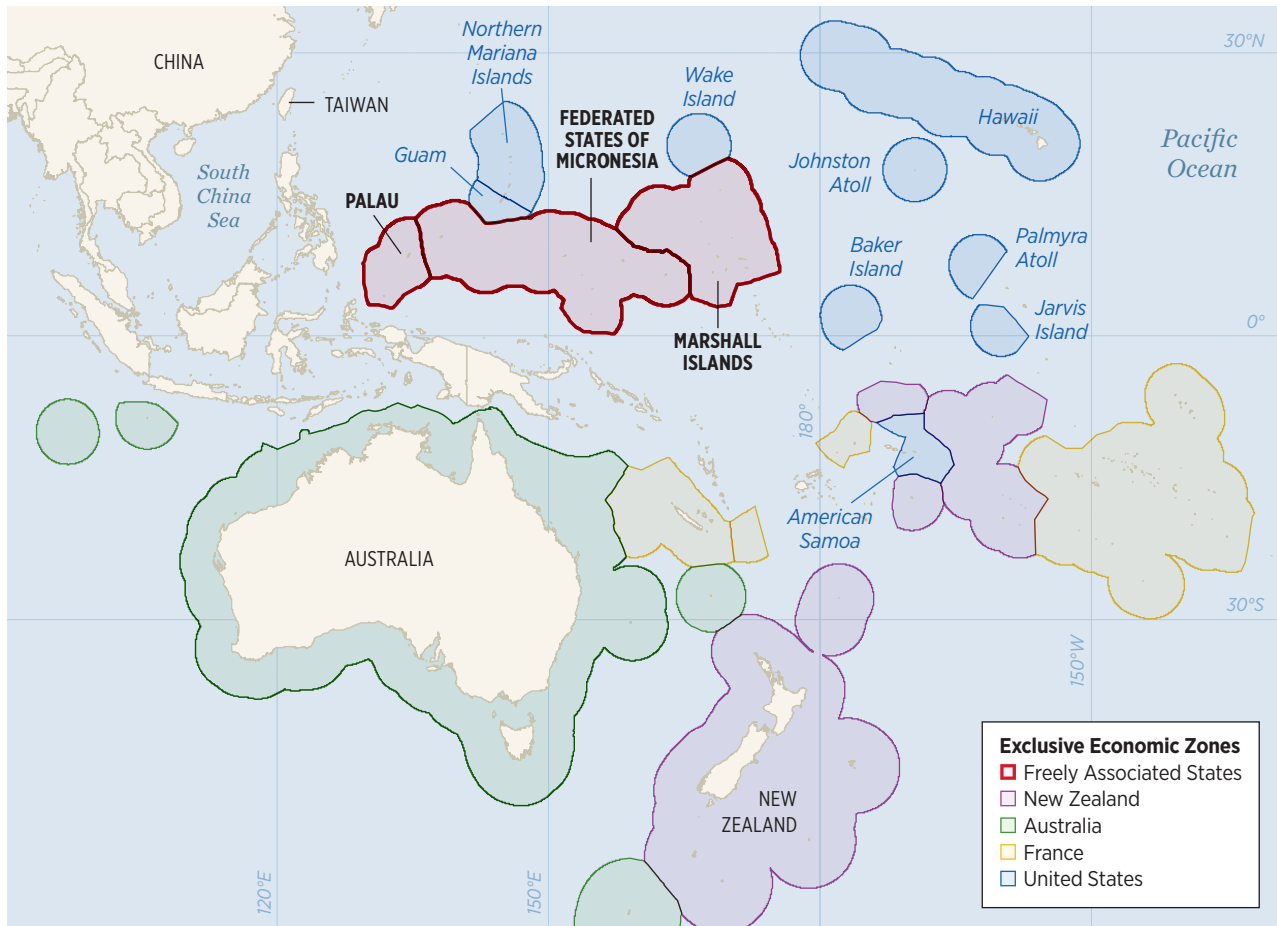
This simple and obvious geographic reality seems to have been forgotten following the Cold War as the U.S. greatly diminished its footprint in the region, closed embassies, shifted focus elsewhere and largely delegated strategic management of the region to others, including Australia. This left a wide opening for China—which has not forgotten how geography shapes history.

Slow Build

As U.S. influence in the Pacific Islands has waned in some parts of the region—as most recently seen by the Prime Minister of Solomon Islands skipping the September 2023 U.S.–Pacific Islands Forum Summit—China has seemingly “pushed on all doors” looking for opportunities to expand its influence.

Some such opportunities came as a result of missteps by other regional powers. For example, when Australia and New Zealand sought to isolate and pressure Fiji following a 2006 coup, Fiji initiated a “look north” policy and pursued expanded cooperation with China.⁵⁵² By 2012, Canberra and

EEZs of Compact of Free Association States, South and Central Pacific States



SOURCE: French Ministry for the Armed Forces, *France's Defence Strategy in the Indo-Pacific*, 2019, https://apcss.org/wp-content/uploads/2020/02/France-Defence_Strategy_in_the_Indo-Pacific_2019.pdf (accessed July 14, 2023), and Heritage Foundation research.

Wellington were forced to readjust their policies, but by then China had gained a significant toehold in the country: In 2017, scores of Chinese police arrived in Fiji to repatriate to China 77 handcuffed Chinese prisoners without even an extradition hearing.⁵⁵³ Similarly, when New Zealand–favored⁵⁵⁴ “pro-democracy” demonstrators in Tonga rioted and burned down sections of the capital, it was China that arrived with loans for reconstruction.⁵⁵⁵

At the same time, in recent years there has been a substantial increase in Chinese citizens arriving in many Pacific island countries (PICs).⁵⁵⁶ Ethnic

Chinese in the Pacific Islands tend to fall into one of five broad categories: well-integrated (including many inter-married) generational citizens; official representatives of the PRC (including state-owned enterprises); major investors; small business operators and shopkeepers; and temporary labor that accompanies Chinese investments and projects.

- Official PRC representatives often display deep expertise in the region, including speaking local languages.

- Some of the major investors active in the region have links to multiple PICs and develop long-term relationships with key local leaders.
- Those who run small businesses can, when required, act as unofficial PRC liaisons to local communities and intelligence sources about the situation on the ground.

Chinese citizens are obligated to support the Chinese state as per China's 2017 National Intelligence Law, which reads:

Any organization or citizen shall support, assist and cooperate with the state intelligence work in accordance with the law, and keep the secrets of the national intelligence work known to the public. The State protects individuals and organizations that support, assist and cooperate with national intelligence work.⁵⁵⁷

Using the (willing or unwilling) Chinese diaspora to build influence has been a key part of Beijing's strategy for decades.

As Jian Yang, in his 2011 book *The Pacific Islands in China's Grand Strategy*,⁵⁵⁸ notes:

Beijing befriended overseas Chinese while at the same time encouraging them to integrate with local communities and become citizens of their adopted countries. Beijing's new policy has called upon overseas Chinese to "serve the country from abroad" (*weiguo fuwu*) instead of asking them to "return and serve the country" (*huiguo fuwu*).⁵⁵⁹

Yang added:

Beijing has had four main expectations for overseas Chinese since 1978. They are to actively participate in Chinese modernization, to actively promote the reunification of the Chinese nation, to actively spread Chinese civilization, and to actively promote the friendship between China and the people all over the World. These aspects are closely related to China's grand strategy,

and overseas Chinese have proved particularly important in the first two areas.⁵⁶⁰

Chinese officials in the PICs keep a close eye on the diaspora and, as elsewhere,⁵⁶¹ coercion can be used to try to enforce compliance.

By the time Chinese General Secretary Xi Jinping visited Fiji in 2014, China was well on its way to building networks across the region, evidenced by Xi's announcement of a "strategic partnership" with eight PICs during the trip.⁵⁶² While the meaning of the announcement was vague, the intent was not, and Beijing has only expanded on those ambitions in the ensuing years.

China-Pacific Island Countries Common Development Vision

In May and June of 2022, Chinese Foreign Minister Wang Yi and his entourage were exempted from COVID-19 restrictions in order to visit eight PICs, during which time two China-drafted agreements were circulated that gave insight into Beijing's ambitions for the region.⁵⁶³

Wang proposed a China-Pacific Island Countries Common Development Vision supported by a China-Pacific Island Countries Five-Year Action Plan on Common Development. This "vision" included:

- law enforcement cooperation, incorporating "immediate and high-level police training";
- "cooperation on network governance and cyber security," including a "shared future in cyberspace";
- the "possibility of establishing [a] China-Pacific Island Countries Free Trade Area";
- enhancing "cooperation in customs, inspections and quarantine";
- creating "a more friendly policy environment for cooperation between enterprises";
- setting up Confucius Institutes;
- training young diplomats; and

- establishing a China–Pacific Island Countries Disaster Management Cooperation Mechanism, including a prepositioned China–Pacific Island Countries Reserve of Emergency Supplies.⁵⁶⁴

The “action plan” included:

- “a Chinese Government Special Envoy for Pacific Island Countries Affairs” (who has since been appointed);
- a “China–Pacific Island Countries Ministerial Dialogue on Law Enforcement Capacity and Police Cooperation” (also completed);
- “assistance in laboratory construction used for fingerprints testing, forensic autopsy, drugs, electronic and digital forensics”;
- “encourag[ing] and support[ing] airlines to operate air routes and flights between China and Pacific Island Countries”;
- “send[ing] 200 medical personnel” in the next five years; and
- sponsoring “2500 government scholarships” from 2022 to 2025.⁵⁶⁵

After seeing the proposals, then–Federated States of Micronesia President David Panuelo wrote⁵⁶⁶ to other Pacific Island leaders arguing that the plans comprised the “single-most game-changing proposed agreement in the Pacific in any of our lifetimes.” China’s intention, he wrote, is:

[to] shift those of us with diplomatic relations with China very close into Beijing’s orbit, intrinsically tying the whole of our economies and societies to them. The practical impact, however, of Chinese control over our security space, aside from impacts on our sovereignty, is that it increases the chances of China getting into conflict with Australia, Japan, the United States and New Zealand, on the day when Beijing decides to invade Taiwan....To be clear, that’s China’s long-term goal: to take Taiwan. Peacefully, if possible; through war if necessary.

The PRC’s proposals were generally not discussed in public despite the PICs being democracies, and Panuelo accused Beijing of waging political warfare through gray-zone activities.⁵⁶⁷ China’s goal, it seems, has been to shift PICs from a relationship of goodwill toward the PRC to one of support, then dependency, and, ultimately, to undermine democracy and have in place compliant regimes.

Commonly, the PRC uses a braided approach in which a project is presented as having a *commercial* benefit, while China gains a *strategic* advantage. Often these initiatives are supported by criminal activity and corruption. A PRC–run and PRC–constructed port may be proposed to aid a country’s economic development (commercial). The port just happens to have specifications that suit the China’s People Liberation Army (PLA) Navy (strategic).⁵⁶⁸ And the contract is won through bribes, and then facilitates illicit activity—which in turn provides more money to bribe elected officials in the target country.⁵⁶⁹

Along the way, institutions of state are weakened and, in the most advanced cases of this form of “entropic warfare,” corruption and chaos undermine rule of law and stability and societal fragmentation occurs—leading to the justification for more authoritarianism and opening the door for more “security” support from China, as seen in the Solomon Islands since 2019.

Solomon Islands Case Study

This strategy has been on display in the Solomon Islands. Solomon Islands Prime Minister Manasseh Sogavare switched his country’s diplomatic recognition from Taiwan to China in 2019. Since then, Sogavare has used money from a Chinese slush fund to give payouts to 39 of the 50 Members of Parliament,⁵⁷⁰ almost all of whom then voted to amend the constitution and postpone elections.

There have also been crackdowns on the media and political opposition, including depriving an elected member of a provincial assembly of his seat for not recognizing China’s definition of the One China Policy.⁵⁷¹ Furthermore, the Solomon Islands government agreed to a security deal with China that, according to a leaked draft, gives Sogavare the ability to invite in the PLA to help

quell social unrest and protect Chinese citizens and major projects.⁵⁷²

It took China less than four years to create a state of dependency among the Solomon Islands' leadership. When Prime Minister Sogavare visited China in July 2023, he declared: "I'm back home."⁵⁷³ Today there are serious concerns that violence could break out in the country—handing Sogavare an excuse to again postpone elections, which he is likely to lose, and invite in the PLA to help "calm" the situation.

Crashing Economies and Countries-Within-Countries

There are reams of examples of Chinese-linked influence operations and overt PRC economic coercion in the Pacific Islands. Two examples, both from countries that recognize Taiwan and have deep defense relations with the U.S. via the Compacts of Free Association, give an indication of how disruptive these can be.

Palau. In Palau, where the U.S. military is constructing a strategically important radar installation,⁵⁷⁴ major influence operations (including by Chinese organized crime),⁵⁷⁵ facilitated the growth of a PRC-dependent tourism sector. Then the PRC deliberately and severely curtailed Chinese tourism in order to put economic pressure on Palau to derecognize Taiwan.⁵⁷⁶ In the face of a cultivated domestic pro-PRC constituency in Palau, the Palauan president resisted the pressure.

Although the pressure continues, there will be elections in 2024. As of summer 2023, Chinese "investors" are also often seen near the location of the construction site of the main U.S. radar installation, with some trying to convince locals that they would be better off with a Chinese-run casino than a military installation that makes them a target.⁵⁷⁷ In fact, in November 2023, Palau's Senate passed a resolution opposing the permanent deployment of U.S. Patriot missile defense batteries.⁵⁷⁸

Marshall Islands. In another case, two Chinese nationals secured Marshall Islands citizenship and, though bribery of high-level Marshallese officials, attempted to set up a semi-autonomous zone within the country⁵⁷⁹ based on the Hong Kong/China model.⁵⁸⁰ This included taking the Marshallese to Hong Kong.⁵⁸¹ Marshall Islands is

home to the strategically important Ronald Reagan Ballistic Missile Defense Test Site on Kwajalein Atoll.⁵⁸² One financial backer of the project was a former Marshallese President. The attempt narrowly failed but one of the people convicted of bribery is back in the Marshalls.

Conclusion and Recommendations: Block and Build

In many cases, the PRC finds an entry point in the PICs through desperation caused by years of neglect (at best) from the West, compounded by the economic hardship caused by the COVID-19 pandemic. Beijing is hoping to gain through subtler political and economic means what Imperial Japan failed to gain through kinetic military operations. Many local leaders know this and are trying to fight back, but they need support. The longer they fight unaided, the weaker their state institutions will become, and the harder the fight will be.

An essential component for repelling Chinese influence operations is to go after the criminality and corruption that is speeding alongside China's expansion in the PICs. Much of the bribery money flows through western systems, and generally, those who are bribed want to spend the money in the West. Tracking, exposing, and prosecuting such corruption is not difficult. A few such high-profile prosecutions, combined with support for an independent judiciary and a free press, can quickly and effectively change the cost-benefit analysis around taking Chinese money.

However just blocking Chinese malign activity is not enough. Building more resilient economies in the region is also necessary. For example, in places like the Solomon Islands where health care is in a state of decay, involving partners from the Quad grouping (Australia, India, Japan, U.S.) could provide better results, leveraging Japan's experience in infrastructure construction in the PICs and India's experience with low cost and effective health care.

That said, while working with partners is important, completely outsourcing American policy and engagement in the PICs to regional partners is not a viable strategy.⁵⁸³ However close the relationships, American allies may not have the same priorities or risks assessments as does the U.S.

The U.S. would benefit from a rounded, permanent presence that builds strong bilateral ties—including ways for PICs to interact directly with the United States, building information flows, trust, and economic opportunities. For example, the U.S. has finally reopened its embassy in the Solomon Islands, but it still does not provide consular services, meaning those applying for a visa to the U.S. must pay to fly to Papua New Guinea to apply. This means a surgeon from the main hospital in the Solomon Islands can be offered an all-expenses paid training scholarship in the U.S. but cannot afford the flight and associated expenses to apply for a visa—and the opportunity to build key people-to-people relationships is lost. That doctor would not have the same issue if he wanted to train in China or Cuba.

The newly opened U.S. Embassy in Tonga also does not provide consular services. If the U.S. does not make it easier for people-to-people contacts that can build resilient economies and societies in the PICs (and build on ties with the U.S.), their citizens will understandably assume the U.S. is not serious about offering a real alternative to the PRC.

China has made it clear what it wants in the Pacific Islands: control. As it has proved by the way the local Coastwatchers⁵⁸⁴ and others⁵⁸⁵ worked with the allies to defend and liberate the PICs during World War II, no one will fight for PIC freedom more than the Pacific Islanders themselves. But they need effective blocking and building tools from their allies, including the United States, to be able to do it. The longer the U.S. waits, the harder it will get: Beijing is counting on it.

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How Wall Street Funds China's Rise

CHRISTOPHER A. IACOVELLA

History suggests the free flow of global capital and investment lifts people out of poverty, promotes growth, and strengthens the rule of law. Allowing global capital to seek out its highest and most efficient use also strengthens relations among nations, which furthers international peace and stability.

This is not how it has worked with China, however. While there is no doubt that capital flows into China have helped lift hundreds of millions of the country's citizens out of poverty, the liberal reforms that were almost universally expected to result never materialized. In fact, the opposite has happened: Beijing has used the openness of the international financial and economic system to increase its international influence and amass leverage over the United States and its allies, resulting in a world that is less open and more authoritarian. It could not have done this without the active and willing support of international investors—particularly those in the U.S.

The Chinese Communist Party (CCP) has been engaged in a multi-decade political and military strategy to realize “the great rejuvenation of the Chinese nation.”⁵⁸⁶ The goal of this long-term strategy is to reshape the international order without engaging in a hot war.⁵⁸⁷ The strategy is broad-based and it includes, among other things,

intellectual property theft, undermining American cultural values, creating social unrest and division in American society, co-opting American elites and heads of multinational corporations, infiltrating U.S. governmental institutions, and accessing Western markets.⁵⁸⁸

As a part of this strategy, the CCP methodically exploited U.S. capital markets to fund its military, cyber, and geopolitical initiatives. Not only did this undermine the economic and national security of the United States,⁵⁸⁹ it also exacted heavy costs on American investors, the U.S. economy, and the integrity of the U.S. capital markets.

As China's great-power competition with America intensifies, the CCP will continue to need uninterrupted access to American financial markets to fund its rise.

Wall Street and China

China must have access to Western capital to become a dominant world superpower,⁵⁹⁰ and it has found a willing partner in Wall Street.⁵⁹¹ For decades, Beijing has used Wall Street to infiltrate U.S. capital markets and fund its economic and military rise. In exchange, Wall Street receives huge fees and access to the Chinese market.⁵⁹² This *quid pro quo* threatens America's economic and national security and harms its working families, savers, and retirees.

The partnership works like so: First, Wall Street institutions spin a narrative about emerging market returns and the “can’t miss China growth opportunity.” Then they market and sell Chinese companies to American investors on U.S. stock exchanges. Proceeds from the sales of those companies are sent to China, and Wall Street continues supporting Chinese companies by putting them in stock index funds, promoting them in the financial media and lobbying Washington on their behalf.⁵⁹³

The scale of this partnership is staggering as Chinese companies have accessed billions of U.S. investor dollars since the early 2000s.⁵⁹⁴ If Wall Street’s plan began with good intentions, it proved short-sighted and economically ruinous for many U.S. investors over the long-term, while posing a clear and growing threat to American security.

Some of this money was obtained under false pretenses or outright fraud. Between 2009 and 2012, numerous Chinese companies executed reverse mergers⁵⁹⁵ to be listed on U.S. exchanges,⁵⁹⁶ and the vast majority were frauds that left American investors with heavy losses and little to no legal recourse.⁵⁹⁷ In 2013, American officials were persuaded by CCP officials to execute a memorandum of understanding⁵⁹⁸ that gave Chinese companies a “free pass” from complying with financial reporting and transparency rules under the Sarbanes–Oxley Act,⁵⁹⁹ enacted in the wake of the Enron and WorldCom frauds.

Wall Street then raised money for Chinese tech companies using a structure called a Variable Interest Entity (VIE), which substitutes the actual shares of Chinese companies for shares of a shell company usually located in the Cayman Islands.⁶⁰⁰ The China-specific VIE structure makes bringing legal action against such companies extremely difficult for American investors.⁶⁰¹ More recently, the CCP pushed Wall Street to include Chinese companies in international and emerging market index funds, which allows these companies to avoid U.S. company-specific disclosure and reporting obligations.⁶⁰²

Collectively, these efforts created real risks for America’s mom-and-pop investors, labor unions, pension funds, and retirement plans, all of whom have lost millions investing in Chinese companies

directly or indirectly through index funds over the past decade.⁶⁰³

If the risk of fraud was not bad enough, a number of Chinese companies listed on American exchanges and included in index funds are actually controlled by the CCP and/or actively under sanction by the U.S. government.⁶⁰⁴ A company is generally placed on the “sanctions” or “entities” list if it is “acting contrary to the national security or foreign policy interests of the United States” or is a “threat to the national security, foreign policy or economy of the U.S.” These lists are not exhaustive, as the vast majority of China’s corporate bad actors with ties to the CCP or Chinese military-industrial complex are either not yet on the U.S. government’s radar or have not yet been implicated in the kinds of known behaviors that require adding them to a list.⁶⁰⁵

Since modern day China operates as a “Party-State,” the lines between Chinese industry and the CCP are often blurred.⁶⁰⁶ Certain industries are inseparably linked with the Chinese government’s technological and military development strategy. U.S. investment in China’s technology sector—in particular, strategic technologies like artificial intelligence—funds Beijing’s challenge to American global leadership and directly threatens U.S. national security by helping America’s top geopolitical adversary develop weapons and technology it could one day use against U.S. soldiers on the battlefield. Reports also suggest that money raised by Chinese companies in passive index funds has been used to underwrite modern slavery and other human rights abuses.⁶⁰⁷

Yet, Wall Street remains silent on the CCP’s use of forced labor,⁶⁰⁸ the ongoing internment of Uyghurs in concentration camps,⁶⁰⁹ China’s emission of more greenhouse gases than all developed countries combined,⁶¹⁰ the buildup of the People’s Liberation Army,⁶¹¹ a disinformation campaign that undermines American values,⁶¹² and a cyber-army that relentlessly attacks the United States⁶¹³ and other nations of the free world.⁶¹⁴

Despite being so outspoken on environmental, social, and human rights issues in the U.S., Wall Street’s virtue-signaling with respect to China seems to end at the water’s edge.⁶¹⁵ It appears that no matter the moral cost, Wall Street will continue working with the CCP.⁶¹⁶

The CCP's Exploitation of the U.S. Capital Markets.

The following describes the methods Wall Street uses to fund China's rise.

Wall Street Stock Exchanges. As of January 2023, 252 Chinese companies were listed on U.S. exchanges with a market capitalization of over \$1 trillion.⁶¹⁷ Each of those companies pays a listing and sustaining fee to the exchange to keep its securities trading.⁶¹⁸ Congress recently acted to prohibit these companies from listing their shares on a U.S. stock exchange if they do not comply with U.S. financial disclosure and auditing laws.⁶¹⁹

U.S. exchanges also have regulatory authority to protect the U.S. investing public from any non-compliant Chinese company whose stock is listed on their exchange. They can use that authority to delist any company, its subsidiaries, or a fund that includes such companies and has not complied with U.S. laws or been named to a U.S. prohibition list.⁶²⁰ To date, they have been reluctant to do so.

The "Passive Index Loophole." According to Bloomberg, "more than 2,000 US mutual and exchange-traded funds—particularly those tracking indexes—have \$294 billion invested across Chinese stocks and bonds."⁶²¹

A passive index fund is a type of investment fund that owns a portfolio of stocks that mirrors the composition of a financial market index (i.e., S&P 500 or Dow Jones). Unregulated index providers⁶²² create these indices, which significantly impact the flow of global capital, especially in international and emerging markets. Inclusion in an index can lead to billions of dollars being steered into a company or country through the sale of mutual funds and exchange-traded funds that track the index.⁶²³ A recent study suggests the dollar amount of foreign investment in Chinese companies was 51 percent higher for those companies in an index.⁶²⁴

A regulatory loophole, the "passive index loophole," allows Chinese companies to avoid the same U.S. Securities and Exchange Commission company-specific disclosure and audit regulations that American companies must comply with to sell stock to American investors. This loophole allows index funds and index providers to direct billions of American investor dollars into opaque mainland Chinese companies.⁶²⁵

Wall Street desperately wanted access to the Chinese market,⁶²⁶ and the CCP needed access to American capital, so together they pressured the index providers⁶²⁷ to include Chinese A-shares⁶²⁸ in their international and emerging market indices. Blindly including A-shares in these indices means neither the index providers, nor the fund issuers, know whether the Chinese companies in the indexes they sold to American investors are Enron-like frauds,⁶²⁹ affiliated with the Chinese military,⁶³⁰ or supporting human egregious rights abuses.⁶³¹

Thus, many investors who buy these funds have no idea their savings are invested in Chinese companies that avoid basic disclosure, financial reporting, and governance standards or are controlled by the CCP.⁶³² As noted above, some of these companies have turned out to be frauds,⁶³³ and some index funds include Chinese companies or their subsidiaries that have been placed on U.S. government prohibition lists. While investors have less understanding about the governance of Chinese companies as compared to countries with a less interventionist government, one thing is clear: When the CCP wants to interfere in a company's business to prevent a financial audit, force change, or access information, it does.⁶³⁴

To address some of these problems, the Trump Administration issued Executive Order 13959, which de-listed and de-indexed 31 firms owned or controlled by the Chinese military trading in U.S. markets.⁶³⁵ The Biden Administration affirmed this order, and it is now a template for ending U.S. investment in China's military-industrial-technological complex.⁶³⁶ While a good start, the 31 firms barely scratch the surface of Chinese military-related companies trading in U.S. markets.

Finally, American investors also purchase investment funds that hold Chinese government bonds or track an index that includes such bonds. This transfers trillions of dollars to China through the direct purchase of Yuan-denominated bonds.⁶³⁷ It also allows China to develop its bond market while sending the savings of America's working families, military service members, pensioners, and retirees *directly* to the CCP.⁶³⁸

The Fiduciary Duty

Institutional investors and asset managers at every level owe a fiduciary duty of loyalty to those

whose money is entrusted to them.⁶³⁹ This duty requires fiduciaries to conduct thorough financial due diligence on any company or fund in which they invest—and that is not possible in China.⁶⁴⁰ The duty also requires those managing money to evaluate the legal protections and enforceability of the law in the country where they choose to send investor money.

In China, Americans harmed by a Chinese company that commits fraud or by the government appropriation of company funds have little chance of being made whole. Additionally, many American investors do not realize the scope of liability associated with owning a U.S.-listed company that does business in China under U.S. law, international law, or otherwise.⁶⁴¹

The fiduciary duty also requires American investors to evaluate the political and reputational risks associated with U.S. companies doing business with the CCP specifically, or in China generally. For example, if China decides to invade, quarantine, or act aggressively with respect to Taiwan,⁶⁴² and the U.S. government responds by imposing economic sanctions that prohibit American companies from doing business in China (as it did after Russia invaded the Ukraine),⁶⁴³ American investors could lose billions. If the CCP responds to sanctions, it could impose capital controls on

foreign money or subject the retained earnings of U.S. company subsidiaries in China to such controls when they attempt to transfer that money out of the country.⁶⁴⁴ This reaction would also force bond funds to re-evaluate whether Yuan bonds should be included in bond indexes sold to U.S. investors.⁶⁴⁵

Conclusion

Twenty years ago, a consensus believed that as China grew wealthier, it would become a responsible international stakeholder: Unfortunately, that never happened. Today, Communist China seeks to become the world's dominant superpower by any means necessary. Two successive U.S. presidential administrations have acknowledged this, with the Biden Administration warning that “China’s leaders seek unfair advantages, behave aggressively and coercively, and undermine the rules and values at the heart of an open and stable international system.”⁶⁴⁶

To surpass the United States as the world's pre-eminent superpower—without engaging in armed conflict—the CCP must have access to Western capital. Luckily for them, Wall Street will continue to put its financial interests above the economic and national security interests of the United States until it is no longer legal or profitable to do so.

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China and the COVID Data Crisis

GEORGE CALHOUN, PHD

The COVID Data Emergency

COVID-19 ignited the worst global public health emergency in 100 years. As of mid-2023, almost 700 million people had been infected worldwide. The World Health Organization (WHO) estimates that 7 million have died, but other authoritative estimates suggest the number of COVID deaths could exceed 30 million.⁶⁴⁷ COVID-19 also created a severe “data emergency” that has impeded efforts to respond to the public health crisis and has undoubtedly cost many additional lives.

Data is key in any crisis response: timely, accurate, accessible data, freely shared and updated. As the COVID virus spread rapidly across the globe in early 2020, the need for accurate information about the origin, nature, and trajectory of the disease became urgent. Medical professionals and public health authorities, initially working in the dark as to the nature of the disease agent, desperately sought crucial data to understand and model its transmissibility, virulence, and mutation rates, as well as how to diagnose, treat, and prevent the illness. Governments urgently needed guidance on how to manage the economic, social, and political impact of the pandemic.

But the supply and quality of vital epidemiological data was compromised from the beginning.

Medical scientists and public health authorities around the world ran up against gaps and deficits in the availability, completeness, and integrity of COVID information.

Some of these problems were the natural consequence of the confusion created by an unforeseen and fast-moving crisis. The first months of the pandemic everywhere were characterized by severe uncertainty and frantic improvisation. Some of the most important early data was never properly collected or retained.

But the worst data deficiencies arose from active policies of information suppression in China, where the disease originated. Some of the most critical data was withheld, or intentionally altered, even destroyed. These policies have continued to this day.

It is becoming clear that the COVID impact on China was and is much worse than portrayed in official statistics. In December 2022, after years of maintaining a storyline of “miraculous” success in containing the virus (often cited by Beijing as evidence of the superiority of the Chinese political system), the country abruptly abandoned its “zero-COVID” policy. This suddenly exposed an “immunologically unprepared”⁶⁴⁸ population of 1.4 billion people to the ravages of the highly contagious Omicron variant.

At the same time, the suppression of key data intensified. China eliminated mass testing and simply stopped reporting some of the most important statistics.⁶⁴⁹ Shortly after China's abandonment of zero-COVID in December 2022, *The New York Times*, in an article titled "As Cases Explode, China's Low COVID Death Toll Convinces No One," wrote: "China's murky statistics are fueling widespread public distrust. Its narrow definition of COVID deaths⁶⁵⁰ 'will very much underestimate the true death toll,' the W.H.O. says."⁶⁵¹

It is worse today. Even the most basic data is now unavailable. As *Nature* magazine reported in June, "China no longer publishes its COVID-19 case count."⁶⁵² Hundreds of millions of Chinese have sickened, and likely millions have died, overwhelming the Chinese healthcare system and wreaking social and economic havoc. Beijing's deliberate coverup of the crisis has damaged China's economy and accelerated the diversifications by many Western companies away from reliance on Chinese supply chains, a trend that will impact the global economic landscape for decades to come.

This essay will survey the data gaps and distortions created by China's systematic suppression of COVID-related information and will review independent estimates of the true impact of the pandemic in terms of infection and mortality in the Chinese population.

Gaps in the Epidemiological Data

China has been the source of many of the major infectious diseases that have emerged in the last century. The country is thus often on the medical front line of new outbreaks. It is where "things happen first"—where critical early data related to a new disease first becomes available. Understanding the epidemiological patterns that develop in China, which first reveal the symptomatic expression, transmissibility, and the virulence of a new infectious agent, is vitally important for public health authorities in other countries.

Unfortunately, the initial instinct of local Chinese officials is often to cover up problems or hide data that do not fit the official storyline.⁶⁵³ China has a history of public health scandals involving faulty vaccines (multiple incidents),⁶⁵⁴ and cover-ups and mismanagement related to the initial

outbreaks of SARS (2003),⁶⁵⁵ bird flu (2004)⁶⁵⁶ and (2013);⁶⁵⁷ and swine flu (2019).⁶⁵⁸

Therefore, it is not surprising that the medical crisis created by COVID in China has unfolded behind a curtain of secrecy, active falsification, and even destruction of data—almost from the first day. Researchers and medical personnel have been put under gag orders. Those who tried to tell the truth in the first weeks of the outbreak were persecuted for "spreading rumors" (famously, and tragically, the case of Dr. Li Wenliang and several other doctors).⁶⁵⁹ Scientific labs in China refused to cooperate with international requests for COVID data.⁶⁶⁰ Official reporting on COVID mortality was shut down after April 2020. Even today, Beijing continues to publish COVID statistics that no one believes, and which are dismissed by most of the media, international authorities,⁶⁶¹ and even (according to leaks) by some Chinese officials themselves.⁶⁶²

Nevertheless, Chinese government statistics can be examined to reveal something of the true scope of the problem, or at least to show how far the official picture differs from reality. This essay will discuss three ways of assessing the plausibility of the official numbers:

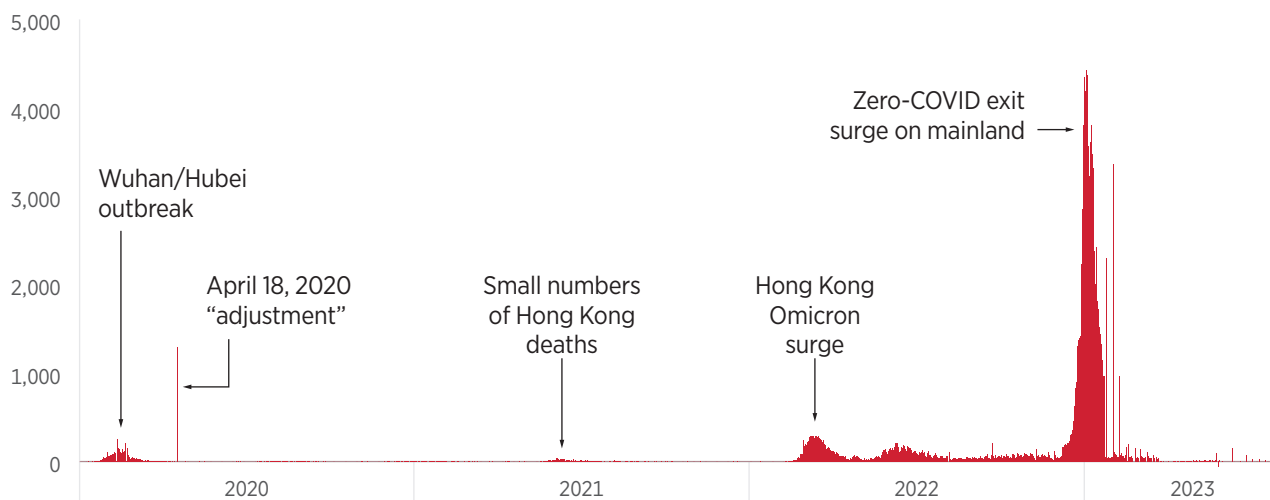
- Analyzing the raw COVID mortality statistics: How many deaths from COVID were reported? Are the numbers believable?
- Comparing China's reported infection and mortality rates with the rates reported for other similar countries: Does China fit the pattern seen elsewhere?
- Analyzing the reported case-fatality rate: Of those who became infected how many later died?

Raw COVID Mortality Figures. The COVID-19 outbreak occurred in China in late 2019 and early 2020 in the Hubei province and its capital, Wuhan. In addition to silencing medical "whistleblowers," Chinese authorities delayed sharing data showing that human-to-human transmission of the virus was occurring. Nevertheless, after some initial confusion, the data collection process seems to have functioned quasi-normally, without undue

CHART 1

New Reported COVID Deaths in China

DAILY FIGURES FROM JANUARY 2020 TO JULY 2023



SOURCE: World Health Organization, “China Situation,” <https://covid19.who.int/region/wpro/country/cn> (accessed November 16, 2023).

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manipulation, for the next few months. China’s infection and mortality figures for the first quarter of 2020 seem plausible today, following a pattern in line with the early experiences in other countries.

But then, in April 2020, Chinese COVID reporting was frozen.⁶⁶³ COVID mortality for the next 22 months was officially nonexistent. In February 2022, a small cluster of deaths was reported—due to the inclusion of mortality figures for Hong Kong, which utilized more open reporting policies. However, except for the Shanghai outbreak in the spring of 2022, China did not report a single new death on the mainland from mid-April 2020 until December 8, 2022, when the zero-COVID policy was canceled.⁶⁶⁴ Even when the Omicron variant slammed Shanghai in the spring of 2022—leading to tens of thousands of reported infections and a three-month near-total lockdown of a city of 25 million people, officials reported just three deaths from COVID.⁶⁶⁵

When, after more confusion and testing halts, zero-COVID was lifted, the authorities adjusted the death toll to about 90,000. Then, in March

2023, the official daily death rate abruptly plunged back to near zero.

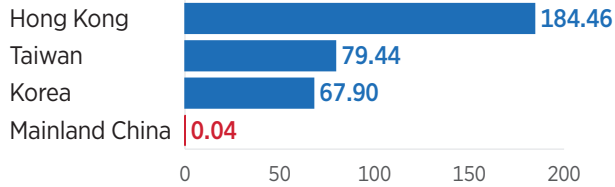
This pattern is an epidemiological impossibility. A disease as infectious as COVID-19—especially the Omicron variant, which is said to be as much as “30 times more infectious than the ancestral SARS-CoV-2”⁶⁶⁶—could not simply disappear. While it is reasonable to believe that the Chinese government’s strict pandemic controls reduced COVID-19 infections and related deaths between mid-2020 and the country’s first Omicron outbreak in January 2022, the long flat-zero periods in the data record for 2022—when Omicron outbreaks were a constant struggle—are evidence that COVID mortality data for Mainland China has been and is still being suppressed.

COVID Infection and Mortality Rates vs. Close Comparables. China’s reported mortality rate, that is, deaths per 100,000 population, is implausibly low. The mortality rates for Hong Kong, Taiwan, and Korea (all countries that followed similar, strict zero-COVID policies) are between *1600 and 4000 times higher* than China’s reported COVID

CHART 2

COVID Mortality Rate

COVID DEATHS PER 100,000 POPULATION



NOTES: Figures for Hong Kong, Taiwan, and Korea are from January 2020 to July 2023. Figures for Mainland China are from April 2020 to December 2022, which is the period from the post-Wuhan blackout to the lifting of the “zero-COVID” policy.

SOURCES: World Health Organization, “China Situation,” <https://covid19.who.int/region/wpro/country/cn> (accessed November 16, 2023); Worldometer, “Reported Cases and Deaths by Country or Territory,” <https://www.worldometers.info/coronavirus/#countries> (accessed November 16, 2023); and Kathy Leung, Gabriel M. Leung, and Joseph T. Wu, “Modelling the Adjustment of COVID-19 Response and Exit from Dynamic Zero-COVID in China,” December 14, 2022, *British Medical Journal*, preprint, <https://www.medrxiv.org/content/10.1101/2022.12.14.22283460v1> (accessed November 16, 2023).

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mortality rate for the period from April 2020 (when reporting shut down) to December 2022 (when zero-COVID ended). While it may be argued that Mainland China followed a somewhat stricter version of zero-COVID, it cannot account for this astronomical discrepancy.

The New York Times assembled data on COVID infection rates and mortality rates from the beginning of the pandemic through March 2023. Unlike many other sources, the *Times* database provides separate figures for Mainland China, Taiwan, and Hong Kong. (Singapore and New Zealand also followed very strict zero-COVID regimes, and are also included here.)

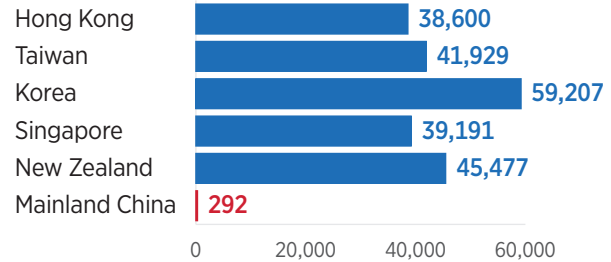
The difference in reported infection rates is extreme: *143 times higher* for Hong Kong than for the mainland.

In general, Hong Kong followed a similar zero-COVID program.⁶⁶⁷ Yet despite this, and despite spending more than five times as much per capita on healthcare (approximately \$3030 for Hong Kong alone⁶⁶⁸ versus \$583 for China overall—which *included* HK), which should have improved

CHART 3

COVID Cases per 100,000 Population

FIGURES AS OF MARCH 10, 2023



SOURCES: Johns Hopkins University & Medicine, “Mortality Analyses,” <https://coronavirus.jhu.edu/data/mortality> (accessed November 16, 2023), and “Tracking Coronavirus in China: Latest Case Count,” *The New York Times*, updated March 10, 2023, <https://www.nytimes.com/interactive/2021/world/china-covid-cases.html> (accessed November 16, 2023).

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treatment outcomes, Hong Kong had a COVID death rate *30 times higher* than the mainland.

These gross disparities are indicative of a vast program of systematic underreporting. Health workers are said to have been pressured to “keep ‘COVID-19’ off death certificates to limit reported numbers.”⁶⁶⁹ Mortality figures have sometimes been released “accidentally” by local officials, and then quickly retracted.⁶⁷⁰ In December 2022, the central authorities changed the official criteria for assigning COVID as a cause of death.⁶⁷¹ *The British Medical Journal* reported that as of late 2022, “China has effectively stopped counting COVID cases and deaths, abandoning mass testing and adopting new criteria for counting deaths that will exclude most fatalities from being reported.”⁶⁷²

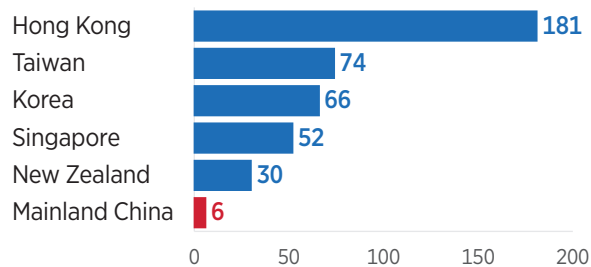
In July 2023, some Chinese provinces even deleted *all* mortality data, to avoid disclosing peripheral information (e.g., figures on cremations ballooning to almost double the normal level) that could be used to infer the true scope of the crisis.⁶⁷³

Infection Rate vs. Mortality Rate. The case-fatality rate (CFR) counts COVID deaths as a percentage of confirmed cases. A scientific study⁶⁷⁴ authored

CHART 4

COVID Deaths per 100,000 Population

FIGURES AS OF MARCH 10, 2023



SOURCES: Johns Hopkins University & Medicine, “Mortality Analyses,” <https://coronavirus.jhu.edu/data/mortality> (accessed November 16, 2023), and “Tracking Coronavirus in China: Latest Case Count,” *The New York Times*, updated March 10, 2023, <https://www.nytimes.com/interactive/2021/world/china-covid-cases.html> (accessed November 16, 2023).

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by researchers in Hong Kong and Shenzhen cited the following figures for COVID infections rates and mortality in Mainland China: “As of 6 December 2022, mainland China has tallied just over 349,938 confirmed COVID-19 cases and 5,235 COVID-related deaths.”

This equates to a CFR of 1.5 percent, which is not out of line with other countries. (The U.S. CFR is 1.1 percent, according to Johns Hopkins data.⁶⁷⁵) However, 88 percent of the reported Chinese deaths took place in the first three months of 2020, in Hubei province. After mid-April 2020 the CFR was just 0.2 percent.

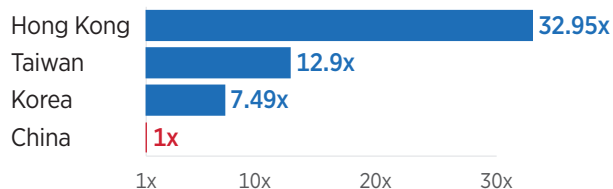
Even this information does not tell the full story. For two years, between April 21, 2020, and April 21, 2022, Chinese authorities reported 111,195 cases of COVID—but just 16 reported deaths. This works out to an impossibly low CFR of 0.01 percent.⁶⁷⁶

This is even more significant than the cross-country disparities in the infection and death rates: The principal claim for China’s zero-COVID policy is the reduction in the number of infections, *not* the reduction in *mortality following infection*. If zero-COVID is assumed to be effective, a lower rate of infection could be deemed a

CHART 5

Observed COVID Fatality Ratios

AS A MULTIPLE OF CHINA’S COVID FATALITY RATIO



NOTE: Data for Hong Kong, Taiwan, and Korea are from January 2020 to July 2023. Data for China are from April 2020 to April 2022.

SOURCE: Johns Hopkins University & Medicine, “Mortality Analyses,” <https://coronavirus.jhu.edu/data/mortality> (accessed November 16, 2023).

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possible outcome—and indeed, some zero-COVID or “elimination” regimes in other countries do show this result, for as long as such regimes are maintained.⁶⁷⁷ However, once an individual is infected, zero-COVID does not impact mortality. The policy does not presume any improvement in the efficacy of treatment for COVID. The Chinese CFR should therefore be roughly similar to the CFR other countries.

This is not what we see. For example, the CFR in Hong Kong (a zero-COVID jurisdiction, with cultural and ethnic characteristics that are the closest to the mainland) is *33 times higher*. The global CFR is 63 times higher.

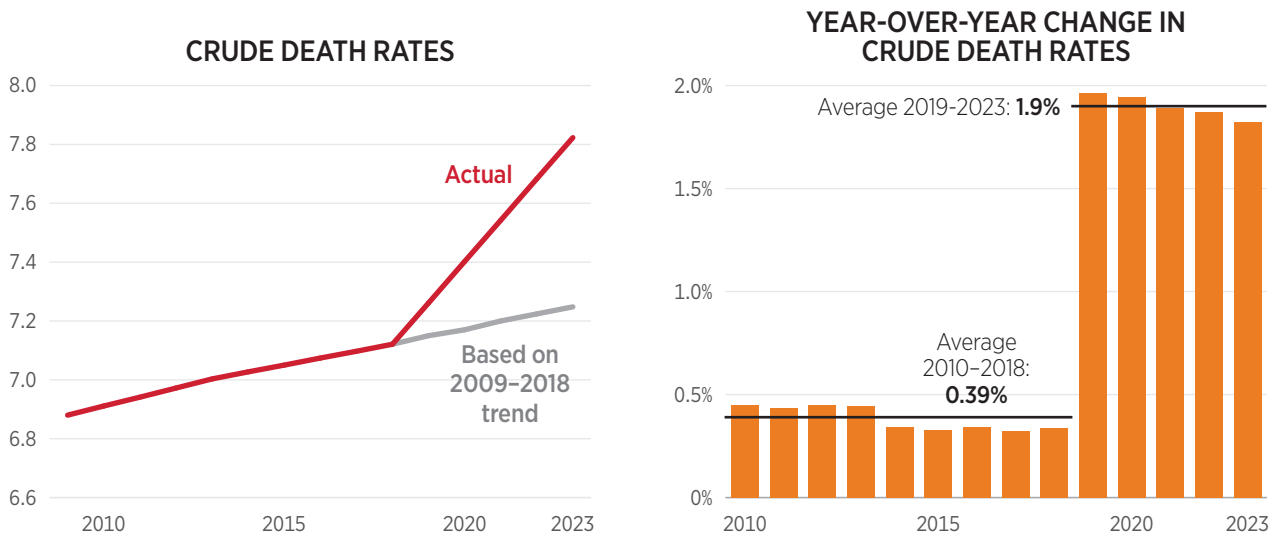
This is *prima facie* evidence of data tampering. Zero-COVID is aimed at *preventing* the spread of the virus to reduce infection rates: It has nothing to do with *treatment*. In other words, we might expect a lower infection rate—but not a lower CFR. There is no evidence, and indeed no claim, that China has developed superior methods of COVID treatment that would lower the death rate among those who are infected.

In summary, as *The Economist* declared, “Official statistics are useless.”⁶⁷⁸

Estimating True COVID Mortality in China

Official and unofficial accounts diverge. For instance:

Crude Death Rates in China, 2009–2022



NOTE: Crude death rates are deaths per 1,000 population per year.
SOURCE: Macrotrends, “China Death Rate 1950–2023,”
<https://www.macrotrends.net/countries/CHN/china/death-rate> (accessed November 16, 2023).

The Politburo Standing Committee said China has “created a miracle in human history” as it has “successfully pulled through a pandemic,” according to a summary published by state-run news agency Xinhua. The summary also said the group claimed that China had kept *the lowest COVID-19 fatality rate in the world*.⁶⁷⁹

And:

Every unofficial indicator suggests that *China is in the grip of a major surge*. Pharmacy shelves have been largely emptied of cold and flu drugs and ibuprofen tablets are being sold individually on government orders, with a limit of six pills per customer. Doctors on social media describe hospitals with staff infection rates of 80%.⁶⁸⁰

What then is the real impact of the pandemic on China? The most basic question is: How many Chinese have actually died?

China’s active suppression of COVID data makes it impossible to answer this question directly. There are many incidental indicia—the sudden and acute shortages of pharmaceutical products, or satellite images of clogged roadways and parking lots near funeral homes and crematoriums in Chinese cities—that suggest the scale of the problem. But these do not easily translate into hard number estimates.

To get at the matter in more quantitative terms, analysts and researchers have used three main approaches to triangulate China’s true COVID situation:

- calculations of “excess mortality”—death counts well above the long-term trend lines;
- extrapolations based on ratios derived from comparable countries; and
- models based on various demographic or economic data that correlate closely enough with COVID outcomes to permit a quantitative calculation.

TABLE 1

Surplus Deaths in China Above Prior Trend Line, 2019–2022

Year	Actual Crude Death Rate	Hypothetical Crude Death Rate as per 2009–2018 Trend Line	Chinese Population	Actual Deaths	Deaths as per 2009–2018 Trend Line	Gross Excess Mortality
2019	7.261	7.148	1,421,864,031	10,324,155	10,163,484	160,671
2020	7.402	7.175	1,424,929,781	10,547,330	10,223,871	323,459
2021	7.542	7.201	1,425,893,465	10,754,089	10,267,859	486,230
2022	7.683	7.224	1,425,887,337	10,955,092	10,300,610	654,482
Four-year total:						1,624,842

NOTE: Crude death rates are deaths per 1,000 population per year.

SOURCE: Macrotrends, “China Death Rate 1950–2023,”

<https://www.macrotrends.net/countries/CHN/china/death-rate> (accessed November 16, 2023).

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Excess Mortality. Death rates are generally very stable. In most countries today, the crude death rate from all causes rises gently as the population ages. “Excess mortality” is defined as a significant upward deviation from the long-term trend.

Beginning in 2019, China experienced a sudden and significant inflection in the crude death rate. The multi-year average rate of annual increase jumps by a factor of five and remains elevated. The total over four years amounts to about 1.6 million excess deaths.

Other models of excess mortality⁶⁸¹ attempt to offset COVID deaths with “lives saved” due to reductions in flu deaths (suppressed by zero-COVID quarantining and masking policies) or reduced traffic deaths (due to less travel during lockdowns). The WHO has even suggested that the COVID pandemic actually *saved* tens of thousands of lives in China, more than offsetting the small official COVID death figures. (It should be clear from the preceding sections that this conclusion cannot be true.)

The Economist magazine has modeled excess mortality extensively and with technical sophistication.⁶⁸² As of July 2023, their model produced estimates of between 560,000 and 3.7 million excess deaths in China, with a central “best estimate” of just under 2 million deaths (roughly in line with my simple estimate provided above).

The most recent assessment of excess mortality comes from an article published in the *Journal of the American Medical Association* on August 24, 2023. An estimated 1.87 million excess deaths occurred among individuals 30 years and older during the first 2 months after the end of China’s zero-COVID policy. Excess deaths predominantly occurred among older individuals and were observed across all provinces in Mainland China.⁶⁸³

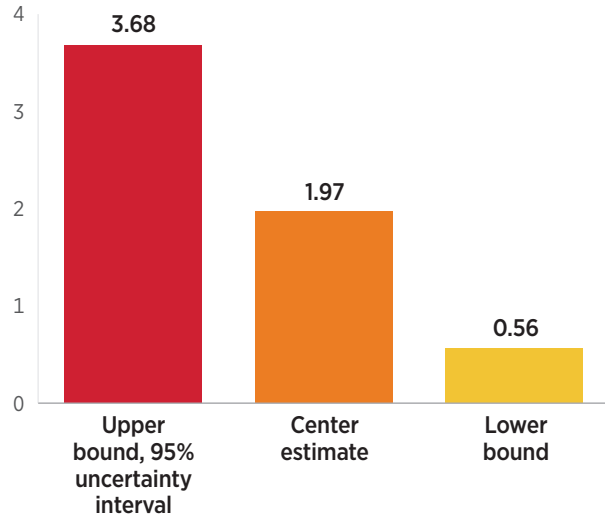
In summary, it is clear that COVID struck China hard, starting in 2019, and persisting over the past four years. The crude death rate skyrocketed, reflecting millions of “extra” deaths above what would be expected from the normal long-term trend.

Estimates Based on Comparables. This approach calculates ratios for infection and mortality for other countries (“comparables”) where COVID data is more complete and of higher quality. These ratios are then applied to the Chinese population to derive an estimate of the impact there. The best comparables would combine: (1) similar cultural and ethnic background; (2) similar economic systems; (3) similar zero-COVID regimes; and (4) more reliable data.

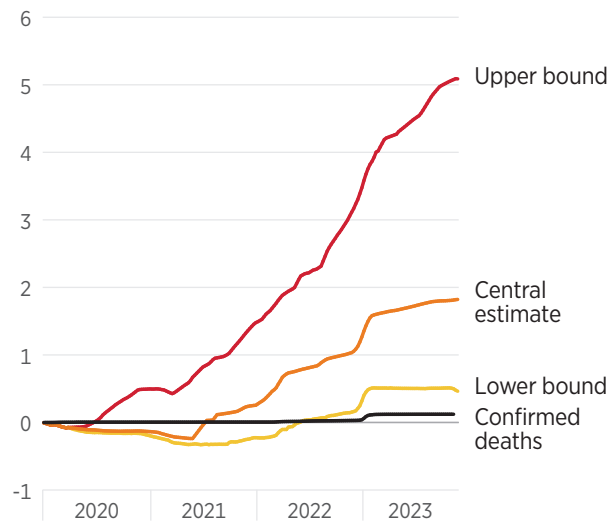
Hong Kong is the closest comparable. The city maintained a zero-COVID regime (albeit less stringent than that on the mainland) until February

Estimated Cumulative Excess Deaths in China During COVID

TOTALS THROUGH JULY 24, 2023, IN MILLIONS



IN MILLIONS, FOR JANUARY 1, 2020 TO JULY 25, 2023



SOURCES: “The Pandemic’s True Death Toll,” *The Economist*, <https://www.economist.com/graphic-detail/coronavirus-excess-deaths-estimates> (accessed November 16, 2023), and Our World in Data, “Estimated Cumulative Excess Deaths During COVID, China,” <https://ourworldindata.org/grapher/excess-deaths-cumulative-economist> (accessed November 16, 2023).

2022, when it was overwhelmed by Omicron. By March 2022, the *British Medical Journal* wrote:

Hong Kong [now] reports the world’s highest death rate as the zero COVID strategy failed. Coronavirus infections are surging... Previously a global model for COVID containment, transmission of SARS-CoV-2 has soared as Hong Kong’s zero COVID strategy has failed to contain the more contagious omicron variant.⁶⁸⁴

In the 12 months following the breakdown of Hong Kong’s zero-COVID regime, the cumulative COVID death count in Hong Kong increased by over 6000 percent—from 213 to 13,370. (The increase in the U.S. over the same period was 22 percent.)⁶⁸⁵ This evidence of the extreme impact of Omicron underscores the point that the return-to-zero in China’s reported daily death rate after

March 2023 is epidemiologically impossible. Applying Hong Kong’s mortality rate of 184 COVID deaths per 100,000 population to China’s population of roughly 1.4 billion people would yield an estimate of about 2.5 million deaths, which is in line with the excess mortality figures cited above.

A Stanford University study⁶⁸⁶ modeled China’s death count based on Hong Kong and Korean experiences resulted in lower estimates: “987,455 and 619,549 maximal COVID-19 deaths, respectively, assuming the entire China population was infected.”⁶⁸⁷ Leaked official Chinese reports indicate that infection rates for the Chinese population reached 80 percent to 90 percent within a few weeks after the lifting of zero-COVID in December 2022.⁶⁸⁸

There are important differences, however, between China and even the best of the potential comparables, which potentially point to a more severe impact in China’s case. These include age, vaccine efficacy, and quality of healthcare facilities.

Aggravating Factors. There are important differences, however, between China and even the best of the comparables, which potentially point to a more severe impact in China’s case. It is beyond the scope of this essay to go into detail on these factors, but the important ones include:

- **Age:** Significant segments of the elderly population in China have not been fully vaccinated. For example, during the Shanghai outbreak, officials reported that only 38 percent of residents over the age of 60 were “fully vaccinated” by Chinese standards.⁶⁸⁹ This “age risk” is acute.⁶⁹⁰ In a detailed study⁶⁹¹ of Hong Kong COVID mortality patterns, 96 percent of all deaths occurred in people over 60, and the death rate for those over 80 was 867 times the rate for those in their 20s. As of March 2022, there were 36 million elderly Chinese who were completely unvaccinated, including 13 million over 80. As the Stanford study cited above concluded that “[t]he most critical factor that can affect total COVID-19 fatalities in China is the extent to which the elderly can be protected.”⁶⁹²
- **Vaccine Efficacy:** The “immunologically unprepared” or “functionally unvaccinated” status of the main body of the Chinese population, due to less effective Chinese vaccines (compared to those used elsewhere), and diminishing immunity benefits over time are reflected in high rates of infection since the end of zero-COVID (as acknowledged in leaks from official sources there).
- **Healthcare Facilities:** The well-known institutional deficits in the Chinese healthcare system, fewer intensive care units, fewer front-line personnel (especially nurses, and especially in rural areas), would likely translate into higher CFRs (i.e., more sick people would die due to inadequate care). A 2022 study by Chinese and American scientists published in *Nature* summarized the downside considerations and noted: “The level of immunity induced by the vaccination campaign would be insufficient to prevent an Omicron wave that would result in exceeding critical care capacity with a projected intensive care unit peak demand of 15.6 times

the existing capacity and causing approximately 1.55 million deaths.”

Ultimately, estimates based on the “comparables” approach are roughly in line with estimates based on excess mortality, and are five to 30 times higher than the official COVID death count published by the Chinese government.

Models. COVID rates for China can also be estimated from various public data sources that partially and/or indirectly correlate COVID mortality.⁶⁹³ In February 2023, *The New York Times* reported⁶⁹⁴ on the results of a number of different modeling approaches, which converged in an estimate of 1 million to 1.5 million Chinese deaths through the end of 2022, and before the real impact of the lifting of zero-COVID (again in line with the excess mortality calculations described in the previous section.) A Chinese-led study extrapolated from the Shanghai outbreak in Spring 2022 and estimated 1.6 million deaths by mid-2023.⁶⁹⁵

Airfinity,⁶⁹⁶ a health data analytics group, modeled 600,000 deaths *in the first month* after the lifting of zero-COVID—10 times China’s official figure during the same time period⁶⁹⁷—and 1.7 million deaths by April 2023.⁶⁹⁸ The Seattle-based Institute for Health Metrics and Evaluation forecast about 300,000 deaths in China from the end of zero-COVID through the first quarter of 2023.⁶⁹⁹ This model has been widely criticized as prone to significant underestimates⁷⁰⁰ for many countries, and updating was “paused” at the end of 2022. Even so, its final forecast was 100 percent higher than the official Chinese figures.

And as noted earlier, *The Economist’s* figure for the COVID deaths is about 2 million (central estimate) as of July 2023—1500 percent higher than the official death tolls.⁷⁰¹

Conclusions and Questions

China’s zero-COVID policy effectively meant *zero reporting* of COVID. The suppression of data began early and instinctively, and became the fixed official policy in April 2020. It did not really change even after zero-COVID was lifted in December 2022. “Zero reporting” continues to this day. The most basic data is apparently no longer even being collected.

Consideration of anomalies in the raw mortality figures, infection rates, and case-fatality rates all show impossibly low figures for China compared to other countries with similar demographic and policy profiles. Hong Kong’s infection rate is 143 times higher than the infection rate reported for the Chinese Mainland, and the mortality rate is 30 times higher than the mainland’s reported rate.

In particular, the extremely low reported Case-Fatality Rate reported by China—33 times lower than the rate of Hong Kong—is medically inconceivable. The fate of an infected person in Mainland China cannot have been very different from that of a COVID victim in Hong Kong or

anywhere else. In fact, the institutional deficits in China’s healthcare system would imply *less* effective treatment of COVID patients compared to Hong Kong or Korea.

The Chinese CFR may be even higher than elsewhere around the world. The number of Chinese killed by COVID is believed to be between 1.5 and 2 million, with estimates ranging up to 3.5 million at the high end, underscoring how the Chinese government’s efforts to coverup the virus outbreak and suppress vital information about the disease have imposed terrible costs not just on the rest of the world but its own citizens as well.

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How One Man-Rule Renders Chinese Policymaking as Opaque—and Ineffectual—as Ever

WILLY WO-LAP LAM, PHD

Making Sense of Xi’s “One-Voice Chamber”

There is a monumental personality cult around Chinese General Secretary Xi Jinping. Xi has often been treated dismissively for his lack of formal education: He was only able to finish middle school before education in China was disrupted by the Cultural Revolution, and doubts have been cast on the veracity and quality of his doctoral thesis for an LLD at Tsinghua University, which he obtained in 2002. Nonetheless, there is no disputing the fact that he is a master in factional intrigue, building up cliques and elbowing aside, if not taking out, enemies from other factions. When he first became General Secretary of the Chinese Communist Party (CCP) in late 2012, the Xi Jinping Faction (XJPF) did not exist because the upper echelons of the party-state apparatus were still dominated by two powerful factions, the so-called Shanghai Gang led by ex-president Jiang Zemin and the Communist Youth League Clique (CYLC) headed by ex-president Hu Jintao.⁷⁰²

By the 20th Party Congress in October 2022, Xi had been the CCP General Secretary and President of the People’s Republic of China (PRC) for 10 years and had already consolidated his power to a degree not seen since the days of Mao Zedong. At the Party Congress, the XJPF monopolized

the majority of slots at the upper echelons of the party. The 24-man Politburo and the seven-man Politburo Standing Committee (PBSC)—the inner sanctum of power—are dominated by allies, cronies and former underlings of the septuagenarian supreme leader. They include Premier Li Qiang, Head of the Legislature Zhao Leji, Director of the General Office of the CCP Central Committee Cai Qi, and so forth.⁷⁰³

Xi’s Personnel and “Xi Thought”

Xi protégés mainly consist of cadres or military personnel that Xi personally knew when he served as a senior official in Fujian Province from 1985 to 2002, in Zhejiang Province from 2002 to 2007, and in Shanghai for just half a year in 2007. Xi, often known as “the new Helmsman,” was also on friendly terms with officers from the People’s Liberation Army and the quasi-military People’s Armed Police who were attached to the now-defunct Nanjing Military Region. Yet another constituent of the XJPF are officials who first made their mark in Shaanxi, Xi’s ancestral home. These included the former and current chairmen of China’s legislature, the National People’s Congress, respectively Li Zhanshu and Zhao Leji.⁷⁰⁴

On the other hand, none of the up-and-comers who were affiliates of the Shanghai Gang or the

CYLC managed to get onto these two ruling councils. The problem with Xi's approach to personnel issues is that he puts loyalty to himself above competence and other qualifications. Quite a number of Xi's favored political stars from Fujian and Zhejiang provinces are trusted apparatchiks well-versed in party-related jobs such as ideology and propaganda. However, they are not English-speaking technocrats with exposure to financial and high-tech sectors in China's main export markets such as the U.S. and the European Union.⁷⁰⁵

Revisions of the PRC Constitution in 2018 and the CCP Constitution in 2022 identified Xi as the "core of the party" and supreme leader in all areas of administration. His thoughts on different aspects of governance—summarized as "Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era" (hereafter "Xi Thought")—were enshrined in the revised 2022 Party Constitution as the "guiding light" for the party and the nation.⁷⁰⁶ Leaders in different units in the party-state apparatus ranging from departments handling economic and trade issues to those running military and foreign affairs have all pledged to use Xi Thought to guide their work. At the same time, hundreds of China's universities and research institutes have set up study centers geared toward elucidating and propagating Xi Thought among China's educated classes.⁷⁰⁷

Xi has broken many respected and well-observed conventions in the party by riding roughshod over rules and regulations laid down by architect of reform Deng Xiaoping, who wanted China to be governed more by clear-cut institutions. Soon after ousting the Gang of Four radicals in 1978, Deng established a series of governance systems. For example, the country would be ruled by a collective leadership; there should be no personality cult or ideological campaigns aimed at glorifying the edicts of a larger-than-life leader; and there should be some degree of the separation of party and government so that a rough give-and-take can be established among the party, the government, the legislature, and the judiciary.

Without established conventions and institutions, Xi will basically be able to govern by diktat similar to what transpired during Mao Zedong's rule from 1949 to 1976.⁷⁰⁸ While it is well known

that the CCP does not honor liberties such as freedom of expression and rule of law despite these values being enshrined in the Chinese constitution, Xi's restitution of Maoist practices has rendered Chinese policymaking and policy execution non-transparent and much more centralized than was the case under predecessors from Deng Xiaoping to ex-presidents Jiang Zemin and Hu Jintao.

Enabling Rule by Decree

A key factor underpinning Xi's "one-voice chamber" is his success in bending the rules of the party and in adding new conventions that would exacerbate the overconcentration of power in his own hands. These rules include focusing decision-making in roughly a dozen murky central commissions (sometimes also called leading groups) at the apex of the CCP, most of which are chaired by Xi himself.

Powerful and active central commissions headed by Xi include the Central Military Commission, the Central Commission for Foreign Affairs, the Central Finance and Economics Commission, the Central Commission for National Security, the Central Cyberspace Affairs Commission, and the Central Commission for Comprehensively Deepening Reforms. It is not certain when these commissions meet; the official media also seldom disclose the resolutions of such high-level conclaves.⁷⁰⁹

One theme of the 20th Party Congress last October was that more power would be given to the "central party authorities" (*dangzhongyang* 党中央) headed by Xi—and that the State Council, or central government, has been relegated to a mere decision-executing body with much less input in policymaking. In the past 10 years, several State Council units have been absorbed by the party apparatus, and how policies are formulated and carried out in their respective jurisdictions has become even less clear than before.⁷¹⁰

Apart from arrogating major decision-making authority to himself and the high-level councils that he controls, Xi has redesigned regulations and working procedures within the party to suit his own interests. While under the stipulations of Deng Xiaoping, the general secretary is but first among equals within the PBSC: All PBSC members have to personally report their work to Xi and obtain his imprimatur. In 2015, Xi came up with

the new dictat that cadres and party members must not “make ungrounded comments” (*wangyizhongyang* 妄议中央) about the “central party authorities”; moreover, officials must observe “political discipline.”⁷¹¹ And to bolster the Xi-centered personality cult, orders have been given newspapers and TV stations to feature Xi activities on the front page of newspapers or during the first few minutes of news broadcasts.⁷¹²

Dubious Results of “Top-Level Design” on Policymaking

To justify his dictatorial rule, Xi has repeatedly underscored the imperative of “top-level [policy] design and formulation” (*dingceng shezhi* 顶层设计).⁷¹³ Given that Xi Thought has been designated as the be-all and end-all of Chinese governance, a policy’s effectiveness—and its congruence with orthodox socialist values—can only be ascertained if it has the personal approval of the supreme leader. In the first 10 years of his rule, Xi mainly relied on a few trusted advisers in formulating financial and economic policies. U.S.-educated Liu He, who was promoted to the Politburo and the post of vice-premier in charge of finance in 2017 and 2018 respectively, was Xi’s closest confidant in mapping out policies regarding finance, trade, and related issues.⁷¹⁴ However, quite a number of controversial decisions on the economy reflect Xi’s personal idiosyncrasies.

Take, for example, Beijing’s decision to crack down on what it regarded as disobedient information technology (IT) conglomerates including Alibaba, Tencent, and Didi Chuxing. In October 2020, the CCP leadership surprised almost everybody by, at the last minute, ordering the withdrawal of the initial public offering of a key Alibaba affiliate, Ant Corporation, in the Hong Kong Stock Exchange. Had this public offering gone forward, it would have been the largest in the world—in addition to boosting the Chinese IT and finance sector. In 2021 and 2022, the Xi leadership began a quasi-political campaign against “greedy” business operators, who were accused of breaking anti-monopoly laws and engaging in “barbarian-style growth” (*yeman zengzhang* 野蛮增长). While these moves by the Xi leadership were controversial, they dovetailed with the ingrained, quintessentially socialist belief by Xi and his like-minded

colleagues that the party-state apparatus must retain control over huge private and quasi-private conglomerates and that the gap between rich and poor must be narrowed.⁷¹⁵

Another example of decision making without sufficient consultation with either senior officials or professionals in relevant sectors is the Xi leadership’s long-standing plan to rely on domestic resources to score big breakthroughs in cutting-edge, high-tech sectors such as semiconductors, artificial intelligence (AI), electric vehicles and other green products, bio-engineering, and pharmaceuticals. This was subsumed under the overarching goal of Made in China 2025. Although part of Xi’s decision to build a technological empire through autarkist self-reliance (sometimes called “internal circulation,” a reference to the “dual circulation” strategy in which Beijing continues to pursue “international circulation” by doing business with Western and Asian countries while relying on domestic resources and talent for breakthroughs in the cutting-edge sectors) was partly swayed by red-hot high-tech competition with the U.S. and its allies, there is no mistaking Xi’s quasi-Maoist proclivity to be self-sufficient in different economic and livelihood sectors.⁷¹⁶ In 2022 alone, the State Council made available \$1.75 billion to boost the nation’s capacity for making state-of-the-art microchips. However, there have been numerous cases of corruption, in addition to recipients of state largesse failing to deliver impressive results.⁷¹⁷

Xi has taken personal charge of the controversial ways in which China first adopted a “zero tolerance,” “full-scale lock-down” policy toward the spread of COVID-19 from early 2020 to late 2022—and then suddenly scrapped all isolation and testing measures in December 2022.⁷¹⁸ In the wake of the unexpectedly slow recovery of the economy, Xi does not seem to have many weapons in his tool box to resuscitate the economy. He has continued the long-standing policy of raising debt to finance infrastructure projects. This age-old policy has been responsible for overleverage at both the central and local levels. Total social debt is approaching 350 percent of gross domestic product. And county-level debt has increased to the unsustainable level of \$23 trillion.⁷¹⁹

Foreign Policy and Russia-China Relations

In terms of foreign policy, which also bears Xi's imprimatur, the dictator's aspiration to seize the "opportunity of the century" to project Chinese power worldwide and to gain parity with the status quo superpower U.S. by the 2040s, has resulted in a "robust balancing coalition" spearheaded by Washington, DC, and supported by American allies such as NATO and several major European countries, as well as such U.S. Asian allies as Japan, South Korea, Australia, New Zealand, and, to some extent, India and the Philippines.⁷²⁰ Despite the obvious weaknesses of the Kremlin, Xi was determined to back Russian President Vladimir Putin as a measure to bar the eastward expansion of NATO: After all, China and Russia have the same goal of thwarting the perceived "expansionism" of the U.S. and its allies.

The top CCP leadership also seems committed to rattle the saber even more flagrantly regarding the Taiwan issue and bolstering China's claim to ownership of almost the entire South China Sea. The CCP, however, has never publicly discussed the murky relationship between Moscow and Beijing from the establishment of the CCP in 1921 to the treaty signed in 2006 to resolve border disputes, which appeared to acquiesce in territories taken away from China since the Czarist era in the 19th century.⁷²¹

According to international affairs expert Zi Zhongyun, a hallmark of Chinese foreign policy is

that it focuses too much on the nation's interest and too little on the welfare of ordinary citizens. Xi's relentless efforts to become a Mao-style helmsman could result in stoking dangerous levels of nationalism, particularly among young Chinese, while failing to buttress the economy, which is the basis of the so-called "great rejuvenation of the Chinese nation."⁷²²

The rhetoric coming from Xi and the XJPF members is mostly about buttressing China's economic and military strength, which underpins the nation's overarching projection of hard and soft power. Very little concern, however, has been expressed by the paramount leader regarding what the people think about the party and its policies. Bao Tong, the late political secretary of the ousted party chief Zhao Ziyang, said before his death that "President Xi told us with passion that only the people have the right to speak out, and that the China dream is the dream of her people.... What suits a particular leader won't necessarily suit tens of millions of ordinary people." Bao warned, "And what is convenient for the propagation of the main theme tune [of the CCP] won't go down well with intellectuals, lawyers, or scientists."⁷²³ Xi's restitution of the one-man rule of Mao—and his construction of a 24-hour, all-weather, AI-enabled surveillance system to weed out dissidents—has yet to provide answers to the fast-deteriorating domestic and foreign problems that the nation is facing.

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