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Staff Research Report



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Cascading Economic Impacts of the COVID-19 Outbreak in China

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Key Findings

- *Halt in economic activity:* In addition to COVID-19's extensive human toll, the outbreak and response to it in China brought economic activity to a standstill. As a result, China's National Bureau of Statistics reported a 6.8 percent contraction in first quarter GDP growth in 2020.¹ For the year, China's 2020 GDP is expected to grow at its slowest rate since 1976,² with forecasts ranging from 3 percent (Goldman Sachs, March 17)³ to 1.2 percent (International Monetary Fund, April 14)⁴ to 1 percent (Nomura, March 31)⁵.
 - *Demand arrested:* Retail sales in January and February fell by 20.5 percent over the same period in 2019 according to China's National Bureau of Statistics. This drop affected U.S. corporate revenues in China: half of 119 companies surveyed by American Chamber of Commerce (AmCham) in China in late March reported revenue declines of 10 percent or greater in their operations in China.
 - *Workers' return to cities blocked:* Movement restrictions to contain the spread of illness slowed the flow of workers returning to cities for work after the Lunar New Year. Post-holiday data from the China Ministry of Transport show a 70 percent drop in passenger traffic.
 - *Production and export flows stalled:* Labor shortages caused a significant decline in production and export shipments. Industrial output plummeted, and recent data indicate a manufacturing contraction in February 2020 below the lowest figure seen in the 2008 financial crisis.
 - *Energy demand plummets:* Given China's position as the largest global oil importer,⁶ OPEC members expressed concern at the sudden stop in oil demand, "particularly in China" but also "in the Asian region and gradually in the world."⁷
 - *U.S. supply chains disrupted:* The halt in production in China upended global transportation and shipping, and snarled global supply chains. The break in these flows affects U.S. companies: survey data suggest about 75 percent of U.S. companies experienced some COVID-19-related supply chain disruption, and over 80 percent said they may experience a negative impact beyond the first quarter.
- *Policy response:* China's policymakers froze economic activity in implementing stringent control measures to curtail COVID-19's spread. Preliminary policy responses have focused on supply-side measures to shore up businesses and prevent their failure, as well as mitigate risks of unemployment. The effectiveness of these measures is being challenged by mounting prospects of reduced external demand. As Beijing's financial system is impaired following years of credit-fueled stimulus, authorities are leaning more on targeted fiscal support that may reinforce state-led management of the economy.
- *Looking ahead:* The shutdown in China's economic activity has now been followed by halting economic activity internationally as other countries respond to the pandemic. On April 14, the International Monetary Fund forecasted a global GDP contraction of 3 percent in 2020, assuming the pandemic subsides in most countries in the second quarter of 2020.⁸ International Monetary Fund Chief Economist Gita Gopinath emphasized the forecast assumed the resumption of economic activity in the second half of 2020.⁹

Scope Note

This paper addresses the economic impact of the COVID-19 outbreak as it occurred in China and traces how subsequent disruptions have radiated across the world economy and impacted the United States. This assessment is preliminary, and new and updated data published subsequently will bring greater clarity and definition to trends discussed in this paper.

* Given great uncertainty regarding how quickly the global pandemic can be contained, these forecasts are highly variable. As of mid-April 2020, many forecasts are being revised every two to three weeks.

Overview: COVID-19 Response and Impact

In the wake of a deadly COVID-19 outbreak that started in Wuhan, the capital of Hubei Province, the Chinese government imposed quarantines and other restrictions on movement to prevent the spread of illness in China. Concerns about a new respiratory virus were evident prior to December 31, 2019, when Beijing first notified the World Health Organization (WHO) of the outbreak.¹⁰ Chinese officials did not take decisive action to contain its spread until late January. On January 23, transport linkages from Wuhan were suspended, followed by the lockdown of 12 other cities in Hubei on January 24 (see Figure 1).¹¹ Beyond Hubei, provinces including Zhejiang, Liaoning, and Jiangxi also placed official lockdowns on residential areas as localities across China implemented formal and informal restrictions on movement.¹² These restrictions quickly and dramatically shut off the flow of people returning from their hometowns to their places of work after the Lunar New Year, China's largest annual holiday. Store closures, authorities' restrictions on movement, and public fears of contagion drastically reduced in-person transactions in routine and holiday spending, resulting in retail sales plummeting by 20.5 percent year-on-year according to official statistics.

Though these containment measures' immediate economic impact fell on consumer demand, as more data are released, major disruptions in supply chains are becoming clearer. The slow trickle of migrant workers returning from their hometowns back to work sites after the Lunar New Year led to large manufacturing and logistics labor shortages that arrested the production and flows of goods within China and between China and other countries. With some notable exceptions, China's economic activity came to a standstill. China's National Bureau of Statistics reported a 6.8 percent contraction in first quarter GDP growth in 2020.¹³ China's annual 2020 GDP growth forecasts range from 3 percent (Goldman Sachs, March 17)¹⁴ to 1.2 percent (International Monetary Fund, April 14)¹⁵ to 1 percent (Nomura, March 31)¹⁶. Shocks to both supply (e.g., manufacturing output) and demand (e.g., consumer spending) have been felt outside of China, even before the virus spread internationally.

Figure 1: Coronavirus Outbreak and Official Action Taken



Note: The precise date of first infection is unknown, but medical research has posited early December. Qun Li et. al., “Early Transmission Dynamics in Wuhan, China, of Novel Coronavirus-Infected Pneumonia,” *New England Journal of Medicine*, January 29, 2020.
Source: Created by Commission staff.¹⁷

U.S. officials offered assistance to China on several occasions. According to U.S. Department of Health and Human Services (HHS) Secretary Alex Azar, on January 6, HHS offered to send a team from the U.S. Centers for Disease Control and Prevention (CDC).¹⁸ This offer was reiterated on January 27, on January 28 via the WHO,¹⁹ and on February 3, when U.S. CDC National Center for Respiratory Diseases Director Nancy Messonnier stated: “As soon as [the CDC is] allowed to go, we will be there ... we are still waiting for that invitation.”²⁰ On January 28, following high-level discussions with the WHO in Beijing,²¹ China agreed it would accept an international team of experts from the WHO, including two experts sent from the United States, which began its mission in China on February 16.²² Meanwhile, the United States moved to restrict travel from China on January 31.²³ On February 4, WHO

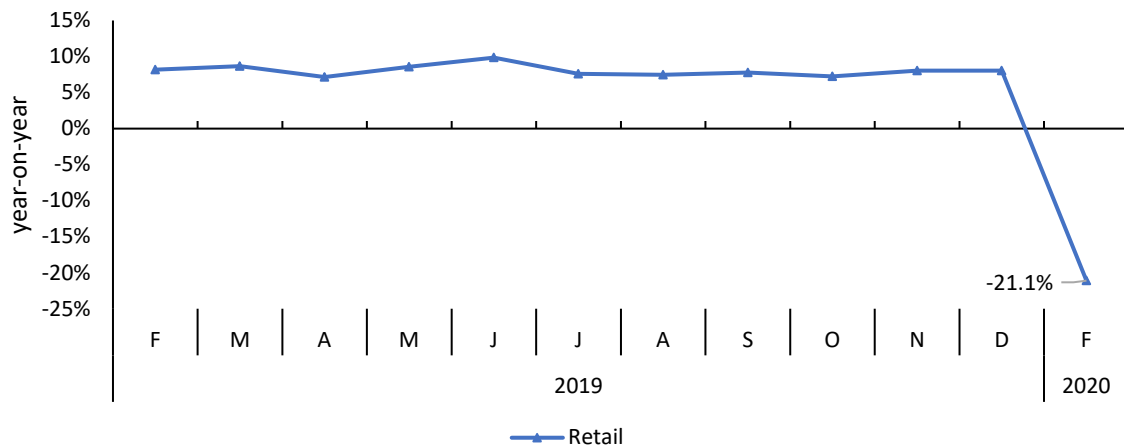
Director-General Tedros Adhanom Ghebreyesus said widespread travel bans and restrictions “could have the effect of increasing fear and stigma with little public health benefits.”²⁴

Chinese Consumer Demand Plummets

The COVID-19 outbreak started at the beginning of the Lunar New Year cutting deeply into spending on services and goods that typically occurs around the holiday period. Affected consumer areas included services like domestic and outbound tourism, restaurants, and entertainment. U.S. restaurant chains including McDonald’s and KFC announced partial closures and reduced operating hours, while Starbucks closed more than half of its 4,292 cafes.²⁵ Nearly all movie theaters in China closed and movie releases were postponed.²⁶ Box-office data company Comscore reported that China’s box office sales in January and February totaled \$238 million, compared to \$2.15 billion for the same two months in 2019.²⁷

The outbreak also affected purchases of consumer goods which typically increase in January and February around the Lunar New Year holiday. Monthly retail sales in January and February plunged 20.5 percent compared to the same two months in 2019, when they had grown by 8 percent (see Figure 2).²⁸ Struggling retail sales will have a greater impact on China’s current economy than previously. Chinese consumer spending accounted for about 60 percent of China’s GDP growth in recent years according to management consulting group McKinsey.²⁹

Figure 2: Change in Monthly Retail Sales, February 2019—February 2020



Note: The National Bureau of Statistics does not release separate January retail sales figures. February retail sales figures combine January and February data to accommodate the Lunar New Year. Monthly retail sales were calculated from year-to-date sales by subtracting the prior month’s year-to-date figure from current month’s year-to-date figure within a given year.

Source: China National Bureau of Statistics via CEIC; staff calculations.

Specific retail categories provide more detail. Total mobile phones sales dropped from 14 million devices sold in February 2019 to 6.34 million devices sold in February 2020, a decline of 55 percent and the lowest amount for February since 2012 when data publication began.³⁰ Total sales of motor vehicles, which had been slowly declining as of mid-2018, fell from 1,481,602 cars in February 2019 to 309,942 cars in February 2020, a drop of 79.1 percent.³¹

While most industries in China experienced major disruptions, niche markets supporting communication online saw an uptick in usage from time spent indoors. As students moved to online classes, Chinese online education providers like VIPKID and Alibaba’s DingTalk began offering free classes and services.³² Free usage could help Chinese online education providers edge in on a valuable industry: in 2018, China’s online education market increased 25.7 percent to \$35.9 billion (renminbi [RMB] 251.7 billion) over 2017.³³ Similarly, technologies to support working from home also accelerated. Mobile market intelligence firm Sensor Tower tracked growth in remote work application downloads between January 22 and February 20, including DingTalk (a 1,446 percent increase), WeChat Work (a 572 percent increase), and ByteDance’s Lark (a 6,085 percent increase).³⁴

U.S. Sales of Goods and Services Falling

With consumption in decline, the commercial performance of U.S. multinational enterprises (MNEs) that rely on China as a source of demand has been affected. A mid-February survey conducted by AmCham China* found that 48 percent of U.S. companies surveyed expected 2020 revenues to fall if they cannot resume normal operations by the end of April.³⁵ This number jumped to 57 percent just one month later as China's policymakers struggled to restore economic activity and the virus' global spread expanded, further dimming business sentiment.³⁶ As of March 25, half of 119 companies surveyed by AmCham China reported revenue declines of 10 percent or higher.³⁷

U.S. firms across a range of industries have warned investors of the risks to healthy sales growth. In a rare advisory released on February 17, leading U.S. consumer electronics firm Apple said it did not expect to reach revenue targets in the first quarter of 2020 due to closures of some stores in China as well as reduced operating hours and low levels of customer traffic in others.³⁸ Separately, in its 10-K filing to the Securities and Exchange Commission in early February, U.S. auto manufacturer General Motors anticipated lower 2020 sales in China as a result of COVID-19.³⁹

The COVID-19 outbreak also upended U.S. trade in services with China as travel restrictions and reduced commercial air service shrank Chinese tourism to the United States, a top U.S. services export.[†] According to the National Travel and Tourism Office at the U.S. Department of Commerce, 366,396 tourists from China traveled to the United States in the January-February 2020 period, a steep 34.6 percent decline from 560,581 tourists in the same period last year.⁴⁰ The Trump Administration's decision to limit travel to and from China on January 31,⁴¹ and U.S. carriers' subsequent moves to suspend or cancel routes from mainland China in February contributed to the decline.⁴² U.S. tourism exports to China are unlikely to stabilize in the short-term as global airlines slash routes and Chinese citizens avoid or are restricted from travel. Analysts estimate that \$10 billion in spending by Chinese visitors in the U.S. economy could be lost as a result.⁴³

The U.S. higher education sector will also be hard hit, with U.S. universities increasingly dependent on tuition from Chinese students.[‡] According to the Institute of International Education, China has remained the largest source of international students for ten years running,⁴⁴ with 369,548 Chinese students enrolled in U.S. higher education programs in 2018 and contributing \$15 billion in tuition payments.⁴⁵ The postponement or cancellation of U.S. college entrance examinations in China, indefinite travel restrictions, and continued uncertainty surrounding when U.S. college campuses will reopen are expected to reduce Chinese demand for U.S. higher education in the 2020-2021 academic year.⁴⁶ University administrators report that cancelled recruitment events in China and inability to work with local recruitment agencies could further depress Chinese student enrollment in U.S. university programs.⁴⁷

Consumption Remains Sluggish Amid Uncertainty and Threatened Incomes

Although the number of new COVID-19 infections is waning in China and Beijing is gradually easing movement restrictions, consumption activity remains subdued due to higher unemployment and underemployment and continuing public concerns about infection. Businesses have moved to offer discounts to Chinese shoppers to boost sales,⁴⁸ but anxiety about the possibility of contracting new infections is keeping citizens at home.⁴⁹ Homebound

* The survey was conducted among 169 member companies distributed evenly between industries (e.g., technology, resources and industrials, consumer goods, and services) from February 17-20, 2020. American Chamber of Commerce in China, "AmCham China Flash Survey Report on the Impact of COVID-19," February 27, 2020. <https://www.amchamchina.org/news/US-companies-significant-negative-business-impact-from-covid-19-revealed-survey-results>.

† Chinese tourism to the United States, which includes travel conducted for business, leisure, and study in the United States, accounted for 56.2 percent of (\$32.1 billion) of total U.S. services exports to China in 2018. U.S. Department of Commerce, Bureau of Economic Analysis, *Table 2.2 U.S. Trade in Services, by Type of Service and by Country or Affiliation*, October 15, 2019.

‡ International students typically pay full tuition when enrolling at U.S. universities, with only 17 percent of international students funding their education at U.S. universities with resources granted by their institution, such as scholarships, grants, and assistantships. According to one study, nearly a third of all tuition payments received by U.S. public universities comes from international students. This has led U.S. institutions of higher education to rely on international students to fund broader operations. See Makala Skinner, "The Financial Risk of Overreliance on Chinese Student Enrollment," *World Education News and Reviews*, December 17, 2019. <https://wenr.wes.org/2019/12/the-financial-risk-of-overreliance-on-chinese-student-enrollment>; BBC, "Trade War: How Reliant Are U.S. Colleges on Chinese Students?," June 12, 2019. <https://www.bbc.com/news/world-asia-48542913>.

consumers have instead turned to online shopping, focusing their purchases on essential products. Online sales of food and consumer goods, for example, increased 26.4 percent year-on-year in January-February 2020, while purchases of clothing fell 18.1 percent in the same period.⁵⁰ Reduced spending on discretionary goods like clothing contributed to modest growth of just 3 percent year-on-year in total online retail sales.⁵¹

A recovery in consumer demand is further challenged by the growing numbers of layoffs and pay cuts, as global buyers—now also affected by the outbreak—delay or cancel orders from Chinese manufacturers.⁵² Though China’s reported unemployment rate is viewed as inaccurate given its political sensitivity,^{*} even the China National Bureau of Statistics’ official rate rose to 6.2 percent in January-February,⁵³ a record high and above the 5.5 percent target set at the 2019 National People’s Congress. A separate joint survey by Chinese recruitment website *Zhaopin* and Peking University provides further indication of stress in China’s labor market, finding that job openings dropped by more than 30 percent in the same period.⁵⁴

To address these challenges, policymakers are taking an array of steps to spur consumption and safeguard incomes. Local government officials in Nanjing, for example, handed out \$44.9 million worth of shopping coupons to drive traffic at retail stores in late March⁵⁵ following guidance by the National Development and Reform Commission and 22 other government departments urging localities to increase consumer spending.⁵⁶ The central government has also promised fiscal support to companies which maintain or increase employment, such as subsidies to firms which hire recent college graduates and refunds of 2019 unemployment insurance premiums.⁵⁷ However, such measures may prove unsustainable as fiscal resources tighten: central and local government revenues fell 9.9 percent year-on-year in January-February, the steepest decline since February 2009.⁵⁸ Additionally, the narrow, targeted nature of such measures may prove ineffective if broader economic activity in China remains subdued.

Cascading Effect of Lockdowns in China Upends Global Economic Flows

Transportation Stoppage and Restrictions on Movement

On January 23, Wuhan officials imposed a city-wide quarantine on its nearly 11 million residents, freezing all rail and bus connections in one of China’s largest transportation hubs.⁵⁹ The China Ministry of Commerce calls Wuhan the largest hub for land, air, and water connections, as well as a major nexus for rail freight and high-speed rail.⁶⁰ Its importance to the automotive and logistics sectors has earned it the nickname of China’s “thoroughfare” and “motor city.”⁶¹ Hubei Province more broadly is a pivotal auto manufacturing base in China. In 2018, it produced 2.42 million vehicles, accounting for about 10 percent of China’s total auto output.⁶² In addition to heavy industry, economist Barry Naughton has pointed out the central and local government have also invested in building Wuhan’s optoelectronics and semiconductors industries, drawing on strong local universities.⁶³

After the 11-week lockdown, Wuhan was officially reopened on April 8. Complete reopening is still tentative, however, as communities where asymptomatic COVID-19 cases are found are still barred from leaving by local authorities fearing a second outbreak.⁶⁴ After Wuhan’s lockdown another 12 cities in Hubei Province soon followed with quarantines, which were not lifted until March 25, when most of Hubei’s 60 million residents were allowed to travel, though COVID-19 testing requirements and imposed isolation upon arrival hinder this process.⁶⁵

While the city of Wuhan and Hubei Province received the strictest quarantine measures, intercity travel, transportation, and logistics across China were affected by a variety of formal and informal restrictions on movement. In mid-February, international news outlets reported that local governments enlisted a diverse array of mobile tracking and neighborhood committee actions to reinforce community-level quarantines in cities across China, instituting measures like temperature checks, mobile phone “health” code scans, checkpoints at building

* Many of China’s official statistics are viewed with suspicion, but the unemployment rate is understood to be the least informative of all key economic indicators for which Beijing publishes data. One 2017 study found that China’s official unemployment rate fluctuated in a narrow range between 4 and 4.3 percent from 2002-2010 and stayed fixed at 4.1 percent since the third quarter of 2010. The official rate’s apparent imperviousness to major fluctuations in China’s economy—such as the global financial crisis—suggest it is tightly controlled by the government. See Shuaizhang Feng, Yingyao Hu, and Robert Moffitt, “Long Run Trends in Unemployment and Labor Force Participation in Urban China,” *Journal of Comparative Economics* 45 (2017) 304-324.

entrances barring nonresidents, drones that scold non-mask wearers, and “hall passes” issued by some housing complexes to limit the movement of people.⁶⁶ Local tracking was sometimes accompanied by local barriers: villages near cities sealed themselves off by closing highways, stopping bus traffic, and setting up barricades to prevent outsiders from entering.⁶⁷ These restrictions were not only implemented near the outbreak epicenter of Wuhan but also elsewhere around the country by local authorities.⁶⁸

China’s Internal Labor Migration: The Flow of Workers in Factory Production

The Wuhan quarantine order was issued a day before Lunar New Year’s Eve. Around the 16-day Lunar New Year festival period, the Chinese government reports nearly 3 billion trips are made⁶⁹ as people journey back to their hometowns from the urban metropolises where they work.* This is commonly described as the largest annual migration of people in the world.⁷⁰ Many of these travelers are officially designated as rural migrant laborers, a “floating population”[†] estimated at 288 million (more than one third of the total labor force) in 2018.⁷¹

In recent decades, China’s factories have depended on an “epic-scale” flow of rural migrants for labor.⁷² As the Chinese economy developed and factories rose in China’s coastal cities, government restrictions placed on labor mobility began to allow workers to leave rural areas in search of higher wages.⁷³ In 2018, 46 percent of these workers were employed in construction and manufacturing, 7 percent in transport and logistics services, and remaining workers elsewhere in the service sector.⁷⁴ Yet these workers hold residency permits known as “hukou” identifying them as rural residents—which typically remains their permanent official status—and their urban presence is treated as transitory, regardless of how long they spend in their new city.⁷⁵ Their jobs are insecure and low-paid, and as non-residents, they and their children are typically ineligible for healthcare, public education, and other government services in the cities where they live. When parents migrate, an estimated two-thirds of their children are “left behind” in hometowns to attend school.⁷⁶ These challenging circumstances make travel over the Lunar New Year imperative for many families.

Consequently, during the Lunar New Year period, migrant workers use their annual two weeks of vacation to travel back home to see their families. The distance depends: according to advocacy organization China Labor Bulletin, in 2018 about 40 percent of migrant workers worked within the same county, 34 percent left their county to find work in their province, and 26 percent left their province for work.⁷⁷ Workers willing to travel outside their county earned an average monthly salary of \$597 (RMB 4,107) relative to \$486 (RMB 3,340) for short-distance migrants.[‡] Stopping this flow almost precisely on the date of the New Year has prevented workers who had returned home for the Lunar New Year from traveling back to their places of work, leading to a halt in production and shipping.

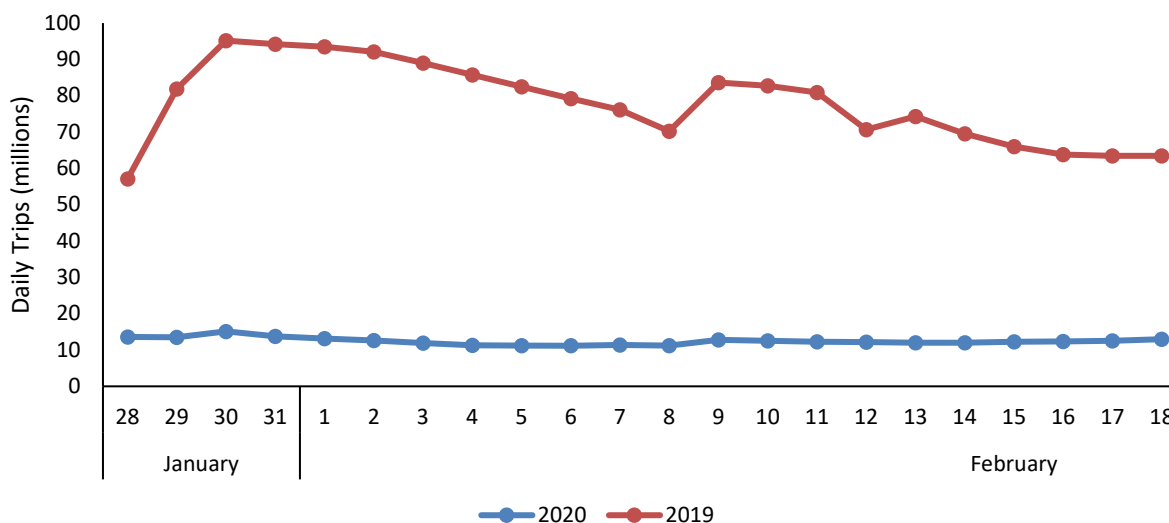
The substantial worker flow disruptions have led to large labor shortages, with workers stranded inside their homes for weeks.⁷⁸ The rate of return to work has varied by locality, as local government officials balance economic imperatives against the risk of contagion. Data from the Baidu Migration Index tracking domestic migrant flows suggested only 38 percent of workers had returned from rural hometowns to urban work sites as late as February 29, five weeks after quarantines were first imposed.⁷⁹ Total passenger traffic fell by more than 70 percent in the three weeks following the Lunar New Year over the same period in 2019 (see Figure 3).⁸⁰

* For the sake of comparison, about 116 million U.S. residents traveled during the Christmas and New Year holidays in December 2019. *Bloomberg News*, “China Will Rack Up Three Billion Trips During World’s Biggest Human Migration,” January 20, 2020. <https://www.bloomberg.com/news/articles/2020-01-20/china-readies-for-world-s-biggest-human-migration-quicktake?sref=FIHD1WjR>; U.S. Census Bureau, “2019 U.S. Population Estimates Continue to Show the Nation’s Growth Is Slowing,” December 30, 2019. <https://www.census.gov/newsroom/press-releases/2019/popest-nation.html>.

† The pool of rural migrant labor is referred to as the “floating population” (流动人口) in Chinese discourse. For more information on China’s rural labor migration, see University of Washington geography professor and long-time observer Kam Wing Chan, “Migration and Development in China: Trends, Geography and Current Issues,” *Migration and Development* 1:2 (2012): 190-191. <http://faculty.washington.edu/kwchan/Chan-migration-China-MD.pdf>. Also see preeminent labor economist Cai Fang et. al., “Migration and Labor Mobility in China,” UN Development Programme, April 2009. http://hdr.undp.org/sites/default/files/hdrp_2009_09.pdf.

‡ Amounts converted from RMB to dollars using the December 2018 exchange rate of 6.876. China Labour Bulletin, “Migrant Workers and Their Children,” May 15, 2019. <https://clb.org.hk/content/migrant-workers-and-their-children>; U.S. Department of the Treasury, “Treasury Reporting Rates of Exchange as of December 31, 2018.” <https://fiscal.treasury.gov/files/reports-statements/treasury-reporting-rates-exchange/itin-12-31-2018.pdf>.

Figure 3: Total Daily Passenger Trips 2019 vs. 2020, January 28—February 18



Note: Passenger trips includes all rail, ferry, and highway trips. Data for 2019 were estimated using year-on-year percentage change values provided by the Ministry of Transport.

Source: China Ministry of Transport via CEIC; staff calculations.

Even after returning from rural hometowns to the cities in which they work, employees must remain in quarantine for 14 days before reentering a worksite.⁸¹ In a mid-February member survey by AmCham China, respondents stated that global and local travel restrictions and lower labor productivity were the most significant disruptions resulting from the outbreak.⁸² Of more than 150 companies surveyed, about 45 percent said they had been impacted by labor disruptions.⁸³

Production Downturn in China

The rate of return to work varies greatly across China due to stymied transportation, in addition to workers’ concerns about being quarantined upon arrival in a new city, and local authorities’ concerns about another outbreak if restrictions on movement are lifted too soon or too quickly. This caution from fearful local authorities and workers has slowed the pace of return to work, though central government authorities called for a return to work in low-risk regions in late February.⁸⁴ Reflecting this uneven restart, manufacturing business owners interviewed by *Caijing* in early February did not anticipate reaching prior output levels until April.⁸⁵ On March 13, the China Ministry of Industry and Information Technology claimed state-owned enterprises and large industrial companies had resumed work at about a 90 percent rate, while small- and medium-sized enterprises (SMEs) outside of Hubei Province had resumed work at a 60 percent rate.⁸⁶ SMEs—which employ 80 percent of workers in China⁸⁷—face particular challenges. A February 2020 Peking University-Tsinghua University survey of 995 coronavirus-impacted small and medium enterprises showed that 85 percent did not have enough cash on hand to survive a three-month shutdown.⁸⁸

Official data released as of mid-March show a severe decline in output. Industrial output* dropped 13.5 percent in January and February of 2020—the largest contraction on record.⁸⁹ The manufacturing Purchasing Managers’ Index (PMI)† dropped to an historic low of 35.7 in February, lower than the 38.8 level recorded during the 2008 Financial

* Tom Orlik, senior economist at Bloomberg, argued industrial output is the most valuable and closely-watched official economic statistic released on a monthly basis. Though Chinese economic policymakers seek to diversify the economy away from industry, the share of manufacturing and industry in China’s economy is still high. Industry (including mining, manufacturing, construction, electricity, water, and gas) still accounted for about 41 percent of GDP in 2018. World Bank, “Industry (including construction) value-added (% of GDP) – China.” <https://data.worldbank.org/indicator/NV.IND.TOTL.ZS?locations=CN>; World Bank, “Metadata Glossary: Industry, value-added (% of GDP)” <https://databank.worldbank.org/metadatataglossary/all/series?search=industry%20value%20added>; Tom Orlik, *Understanding China’s Economic Indicators*, FT Press Science, 2012, 24.

† The Purchasing Managers’ Index (PMI) is a month-on-month indicator showing trends in the manufacturing sector, compiled from a monthly survey of enterprise purchasing managers. Above 50 indicates an expansion, normally with higher volumes of new orders and

Crisis (see Figure 4).⁹⁰ Though it rose to 52.0 in March, China’s National Bureau of Statistics cautioned this expansionary figure “more reflects that more than half of the surveyed enterprises had returned to work and production,” an improvement over last month, and “did not mean that China’s economic operation had returned to normal.”⁹¹ The National Development and Reform Commission reported that China’s electricity consumption fell by 7.8 percent in January and February 2020 relative to the year prior—the largest drop in five years.⁹² Published electricity consumption figures likely overestimate actual usage, as business news outlet *Caixin* reported some local officials and companies created the appearance of consumption to meet assigned back-to-work production targets by leaving lights on and air conditioners and factory equipment running.⁹³ For instance, on February 24, the city of Hangzhou encouraged businesses to use at least 75 percent of the electricity used in January, as January usage rates were viewed as a return to full production.⁹⁴ An unnamed civil servant estimated the real resumption rate for a Hangzhou industrial park at 40 percent.⁹⁵

A similar plunge in the imports index and new export orders index points to a deep decline in trade due to disruptions and order cancellations caused by the COVID-19 outbreak (see Figure 4).⁹⁶ Chris Rogers, research analyst at trade data provider Panjiva, stated: “Trade just stopped. There were no shipments going out of ports, either the inland ports or the outbound ports.”⁹⁷ The collapse in industrial output and trade activity has prompted Chinese companies to seek legal protection. The China Council for the Promotion of International Trade stated that it had issued 3,325 force majeure* certificates covering \$38.5 billion in the first three weeks of February, exempting exporters from contractual obligations in the wake of the outbreak.^{†98}

output. Below 50 indicates a contraction. According to Tom Orlik, senior economist at *Bloomberg*, the China Federation of Logistics and Purchasing’s PMI is the largest sample and most comprehensively available public data. Tom Orlik, *Understanding China’s Economic Indicators*, FT Press Science, 2012, 41-42.

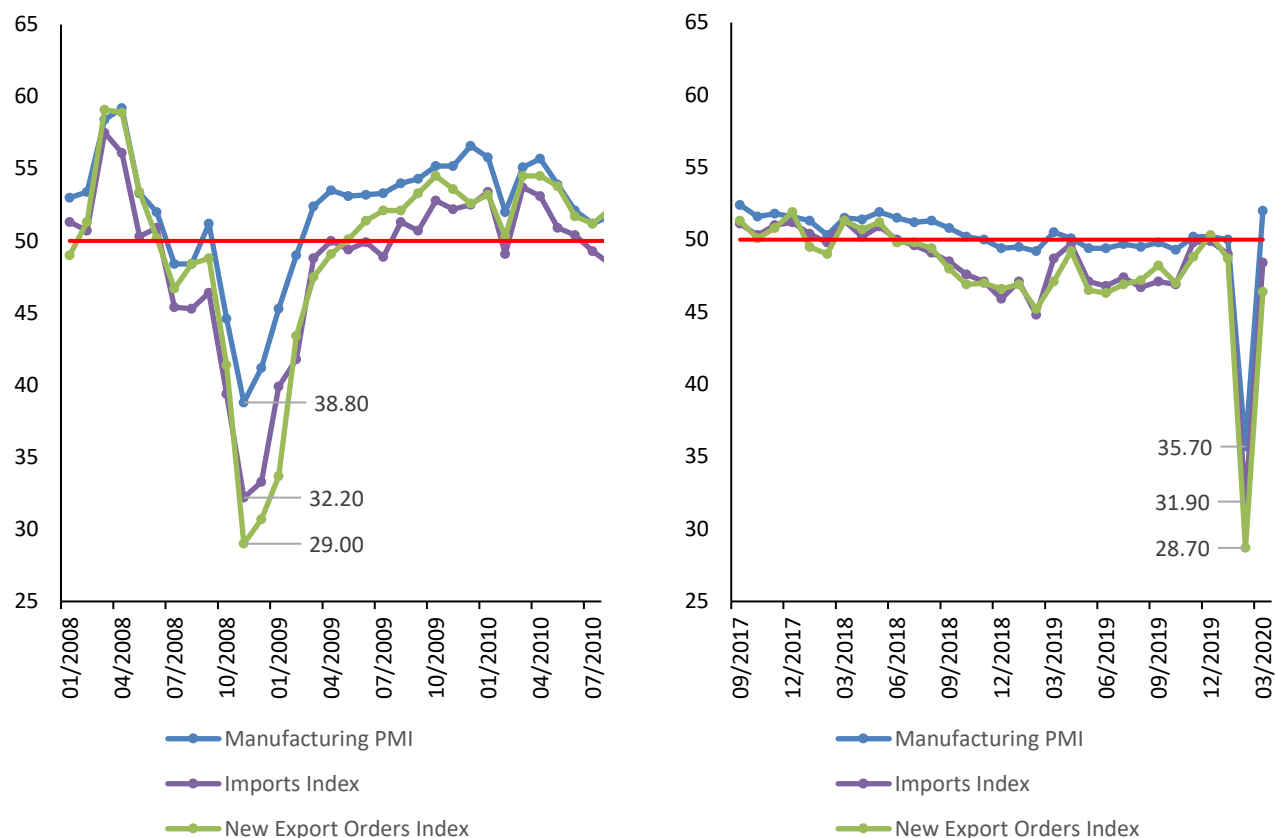
* Force majeure is a provision commonly found in commercial contracts that frees both parties from responsibility if an extraordinary event prevents one or both parties from fulfilling contractual obligations. These events must be unforeseeable and unavoidable—often referred to as “an act of God”—and not the result of the invoking party’s actions. Cornell Law School Legal Information Institute, “Force Majeure.” https://www.law.cornell.edu/wex/force_majeure.

† Chinese firms’ increased invocation of force majeure provisions heightens the risk that implementation of the U.S.-China Phase One Trade Agreement signed in January 2020 could become derailed. Though the agreement’s text does not include force majeure provisions specifically, it does allow for consultations in the event of an unforeseeable circumstance. Beijing could leverage such provisions to delay its compliance with the agreement. For further discussion of the Phase One Agreement and prospects for disrupted implementation as a result of the COVID-19 outbreak, see U.S.-China Economic and Security Review Commission, *March 2020 Trade Bulletin*, March 9, 2020, 10. <https://www.uscc.gov/sites/default/files/2020-03/March%202020%20Trade%20Bulletin.pdf> and U.S.-China Economic and Security Review Commission, *The U.S.-China “Phase One” Deal: A Backgrounder*, February 4, 2020, 1, 3. <https://www.uscc.gov/sites/default/files/2020-02/U.S.-China%20Trade%20Deal%20Issue%20Brief.pdf>.

Figure 4: Manufacturing PMI and Export and Import Indices

January 2008—July 2010

September 2017—March 2020



Note: Above 50 indicates an expansion, normally with higher volumes of new orders and output; below 50 indicates a contraction.
 Source: China Federation of Logistics and Purchasing and National Bureau of Statistics via CEIC.

Turmoil in Energy Markets

The standstill in Chinese production and halt in flows of goods and people has drastically depressed Chinese demand for energy products such as crude oil and liquified natural gas (LNG), adding pressure to an oil supply glut that had materialized at the end of 2019.⁹⁹ In December of 2019, Institute of International Finance economist Garbis Iradian had forecasted a supply glut, pointing to high output from Brazil, Canada, and the United States.¹⁰⁰ The COVID-19 outbreak exacerbated this challenging outlook. As the Organization of the Petroleum Exporting Countries (OPEC) reported in April 2020: “The largest ever monthly decline in petroleum demand in China occurred in February 2020.”¹⁰¹ Chinese oil demand “shrank by a massive 3.2 million barrels per day” over the prior year.¹⁰² Research by OPEC forecasted China’s 2020 demand for oil will decrease by 0.83 million barrels per day over 2019.¹⁰³ As the largest oil importer,¹⁰⁴ Chinese oil consumption has a significant impact on global demand. In 2019, China accounted for 14 percent of global oil demand and more than 80 percent of growth in oil demand.¹⁰⁵ Following the outbreak in China, the OPEC Joint Technical Committee held a meeting on February 8 to recommend new and continued oil production adjustments in light of “the negative impact on oil demand” due to depressed economic activity, “particularly in the transportation, tourism, and industry sectors, particularly in China.”¹⁰⁶ In LNG markets, on February 10, *Caixin* reported Chinese state-owned oil giant China National Offshore Oil Corp. (CNOOC) requested a reduction of an unknown quantity in LNG shipments, invoking a “force majeure” clause due to COVID-19.¹⁰⁷ S&P Global Platts, an energy and commodities analysis group, stated China’s LNG imports in January and February fell more than 6 percent over the same period in 2019.¹⁰⁸

Prices have also dropped in this period. OPEC's reference price index fell from \$66.48 per barrel in December 2019 to \$55.49 per barrel in February 2020, a drop of 19.8 percent.¹⁰⁹ These price cuts are causing financially strapped* U.S. energy producers to cut back investment in oil and gas projects as profits erode. The U.S. Energy Information Administration forecasts that the current drop in oil prices will lead to lower U.S. crude oil production beginning in the third quarter of 2020.¹¹⁰

Global Shipping Flows in Disarray, Disrupting U.S. Trade

COVID-19-related disruption in China has upended logistics flows of maritime and air freight shipping, severely affecting U.S. supply chains and U.S. business' ability to meet demand for goods ranging from mobile phones to medical supplies. On February 11, maritime freight industry organization Baltic Exchange's main ocean freight index, which tracks maritime shipment price changes, nearly fell to a four-year low, pulled down by a drop in demand for capesize vessels used to carry commodities.^{†111} Basil Karatzas, the CEO of shipping finance company Karatzas Marine Advisors and Co., said the fall in demand for commodities had lowered freight rates for commodity-carrying dry bulk and tanker vessels.¹¹² Container shipping has also suffered. Chinese ports processed about 715,000 containers a day in 2019, about 30 percent of global traffic.¹¹³

On the U.S. side, container volume from China stood at 9.9 million twenty-foot container equivalents in 2019, about 40 percent of all container volume imported into the United States.¹¹⁴ For major U.S. ports, Chinese import volumes ranged from "the high 20 percent range" of container volume in the northeast to about 59 percent of all containers shipped to Los Angeles and Long Beach, California.¹¹⁵ Due to disruptions, in the first quarter of 2020, container ship operators cut capacity by cancelling sailings.¹¹⁶ Operators cancelled 26 sailings to the ports of Seattle and Tacoma,¹¹⁷ 60 sailings to the ports of Los Angeles and Long Beach,¹¹⁸ and a total of more than 110 sailings to all ports in North America.¹¹⁹ Marine data company Alphaliner estimated that a record 2 million containers of shipping capacity were idled in late February, greater than the 1.5 million estimated to be idled at the height of the 2008-2009 financial crisis.¹²⁰ Beyond cancelled sailings, ocean freight shipping lines also reported in mid-February that some countries had imposed 15-day quarantine measures on ships that had visited China, causing further delays.¹²¹

Delays and cancelled sailings have upset shipping patterns on both sides of the Pacific, creating challenges for U.S. importers and exporters. Lacking the personnel to unload, wait times in the southern port of Zhoushan—the third largest global container port by loading capacity—rose nearly 20 hours to more than 60 hours in mid-February.¹²² Between slowdowns and cancellations, many refrigerated ships that transport food and other perishable items remain docked in Chinese ports, with few left to carry U.S. agriculture and forestry exports east.¹²³ For instance, due to the drop in Chinese exports to the United States, U.S. exporters of grains used as animal feed lacked the empty containers to send product back to China.¹²⁴ These conditions have created a bottleneck. On February 14, FedEx warned customers that ocean freight price rates would increase if demand from U.S.-based exporters and producers rose while shipping capacity remained limited.¹²⁵ As of March 2, DHL Global Forwarding's ocean freight segment reported moderate declines in volume capacity and moderate to strong price increases.¹²⁶

As maritime shipping was disrupted and air freight capacity was cut due to passenger flight cancellations, air freight has simultaneously experienced both a rapid hike in demand for expedited shipping and diminished capacity in supply.[‡] This sudden bottleneck led to an increase in prices while air freight is "severely constricted," according to Phil Levy, chief economist at logistics provider Flexport.¹²⁷ For instance, DHL Global Forwarding stated on February 14 that "because of the force majeure situation," the company was "not in a position to honor agreed

* According to law firm Hayes and Boone, 42 U.S. oil and gas producers with \$25.8 billion in debt, nearly double the \$13.1 billion incurred in the prior year, filed for bankruptcy in 2019. Hayes and Boone, "Oil Patch Bankruptcy Monitor," January 17, 2020, 2, 11-12.

† This index tracks price rates for capesize, panamax, and supramax vessels that transport bulk dry commodities. The largest, capesize vessels, derive their name from their sailing route: because they are too large to pass through the Panama Canal, capesize vessels must sail via the Cape Horn on the tip of Chile to cross from the Atlantic to the Pacific. The panamax is smaller and capable of passing through the Panama Canal. Reuters, "Baltic Index near 4-Year Low as Virus Mutes Shipping Activity," February 11, 2020. <https://www.reuters.com/article/baltic-index/baltic-index-near-4-year-low-as-virus-mutes-shipping-activity-idUSLAN2AB2YB>; Maritime Connector, "Capesize." <http://maritime-connector.com/wiki/capesize/>; Maritime Connector, "Panamax." <http://maritime-connector.com/wiki/panamax/>.

‡ Passenger airlines also carry air freight cargo in the hold. In Asia, passenger airlines transport about 45 percent of all air freight cargo according to Neil Jones Shah of Flexport. Alex Davies, "Airlines Use Empty Passenger Jets to Ease the Cargo Crunch," *Wired*, March 17, 2020. <https://www.wired.com/story/airlines-use-empty-passenger-jets-ease-cargo-crunch/>.

contractual rates and transit times” but would find alternatives such as charter flights to move cargo.¹²⁸ As the virus spread internationally and flight cancellations continued, on March 24, air cargo data provider TAC Index reported air freight shipping rates had spiked to their highest price level in 16 months.¹²⁹ By late March, air freight rates had risen to the point that—in the absence of demand for air travel—passenger carriers such as Delta Air Lines and United Airlines began to charter jets to carry air freight.¹³⁰

Production Breaks in China Choke Supply Chains for U.S. Companies

Because China is a global manufacturing hub, domestic supply chain disruptions sparked by COVID-19 have triggered shocks across the global economy and brought into sharp relief the risk of reliance on China as a source of intermediate and finished goods. According to a survey conducted by the Institute for Supply Management,* nearly 75 percent of U.S. companies report supply chain disruptions in some capacity due to COVID-19-related transportation restrictions, and more than 80 percent believe their business will experience negative impact beyond the first quarter of 2020.¹³¹ A separate survey conducted by AmCham South China in mid-March† indicated that 32 percent of firms operating in southern China—a nexus of Chinese manufacturing activity—are facing supply shortages.¹³²

With thinner inventories, less cash on hand, and narrower supply networks, U.S. small businesses are particularly poorly insulated from supply shortfalls in China. A March 20 survey‡ by the National Federation of Independent Business, for example, found that 76 percent of U.S. small businesses are being negatively impacted by COVID-19, citing supply chain disruptions and squeezed sales as top reasons for concern.¹³³

Parts and inputs shortages and increased production costs arising from rerouted logistics and scrambled supply networks are causing output delays for manufacturers outside of China. Though few sectors are left unaffected, China’s prominent role in the production of computer and electronics products, pharmaceuticals, and automotive parts leaves those sectors particularly exposed.

- *Computer and electronics products:* The computer and electronic products industry is at particular risk of disruption due to thin supply inventories and lack of alternative sources beyond China§ for parts and assembly.¹³⁴ Many U.S. electronics firms rely on components provided by Chinese suppliers. In a mid-February survey administered by U.S. electronics equipment trade organization IPC, 84 percent of U.S. electronics firms surveyed expressed concern about the impact of COVID-19 on their business operations, with 65 percent anticipating delays in shipments from China.¹³⁵ Microsoft announced in late February its projected earnings for the third quarter of 2020 would be revised downward, as its supply chain in China was returning to normal operations at a “slower pace than anticipated.”¹³⁶ As firms scramble to reroute production and assembly outside of China, they are incurring increased costs for logistics. For example, South Korean consumer electronics firm Samsung has been forced to fly electronic components for its

* The Institute for Supply Management is a non-profit professional supply management organization representing 47,000 companies in more than 90 countries. The survey was completed by 628 member U.S. companies with manufacturing (52 percent) and non-manufacturing (48 percent) operations from February 22 to March 5. Institute for Supply Management, “COVID-19 Survey: Impacts on Global Supply Chains,” March 11, 2020. http://ism.files.cms-plus.com/ISMReport/ISM_Coronavirus%20Survey%20Release_3.11.20_FINAL.pdf.

† The survey was conducted among 237 random companies operating in Southern China from March 9-14, 2020, with U.S. multinationals accounting for 57 percent of companies surveyed. Multinational enterprises from other countries as well as small and medium-sized Chinese enterprises also participated in the survey. Most firms (76 percent) work in the manufacturing sector, followed by wholesale and retail (20 percent) and logistics (4 percent). American Chamber of Commerce in South China, “Special Report on the Impact of COVID-19 on Supply Chains,” March 18, 2020, 4-5. <http://www.amcham-southchina.org/amcham/static/publications/specialreport.jsp>.

‡ The survey was conducted with a random sample of about 300,000 small business owners on March 20, 2020. NFIB collected 700 usable responses from small employers with 1-360 employees. The National Federation of Independent Business, “NFIB Study: COVID-19 Impact on Small Business: Part 2,” March 23, 2020. <https://www.nfib.com/content/press-release/economy/nfib-study-covid-19-impact-on-small-business-part-2/>.

§ According to the McKinsey Global Institute, China accounts for nearly half of global production of computers and electronic products. Jonathan Woetzel et al, “China and the World: Inside the Changing Dynamics of a Changing Relationship,” *McKinsey Global Institute*, July 2019, 57. <https://www.mckinsey.com/~media/McKinsey/Featured%20Insights/China/China%20and%20the%20world%20Inside%20the%20dynamics%20of%20a%20changing%20relationship/MGI-China-and-the-world-Full-Report-Feb-2020-EN.ashx>.

Galaxy line of smartphones to Vietnam for finished production, an activity that otherwise would have been completed on factory floors in China.¹³⁷

- *Pharmaceuticals*: Mark Abdo, Associate Commissioner for Global Policy and Strategy at the U.S. Food and Drug Administration (FDA), testified that in 2018, nearly 15 percent of all U.S. drug imports, by import line,* originated from China.¹³⁸ Experts estimate a much higher percentage of active pharmaceutical ingredients (APIs) from China—key inputs into finished drugs—are further upstream in the U.S. pharmaceutical supply chain.† Though the FDA states it is unable to determine the volume of APIs manufactured in China given supply chain complexities and gaps in what pharmaceutical companies are required to disclose about their inputs,¹³⁹ the FDA currently reports shortages of at least 17 antibiotics and 13 anesthetics which are globally sourced.^{‡140} For example, antiviral therapies such as hydroxychloroquine and azithromycin, which are being trialed as potential COVID-19 treatments,¹⁴¹ are in shortage.¹⁴² As cases of COVID-19 mount in the United States, there is also concern that supplies of sedatives and anesthetics essential to ventilator use are becoming strained internationally. According to a survey of 3,000 U.S. hospitals, U.S. demand for sedatives and anesthetics jumped 51 percent in March from a January 2020 baseline.¹⁴³ Only 63 percent of those U.S. orders were filled.¹⁴⁴ Separately, according to the FDA, sedatives such as fentanyl and propofol, whose ingredients are reportedly sourced chiefly from China,¹⁴⁵ are in shortage as of April 2020.¹⁴⁶
- *Automotive*: COVID-19 has hit the automotive sector particularly hard because Wuhan serves as a hub§ for the production of cars and automotive parts.¹⁴⁷ In February, global vehicle sales were estimated to slump 2.5 percent in 2020 from 90.3 million vehicles sold to 88 million.¹⁴⁸ U.S. auto manufacturers reported that same month that the final assembly of vehicles was being curtailed by stalled flows of auto parts from China,¹⁴⁹ with U.S. imports of Chinese automobile parts falling 19.1 percent year-on-year in January and February.¹⁵⁰ Prospects for auto sales have since dimmed further as factories worldwide close due to policies to protect workers from the spread of the virus and consumers delay vehicle purchases amid heightened economic uncertainty. On March 23, S&P Global estimated global sales could fall by almost 15 percent in 2020 to less than 80 million units.¹⁵¹

Reports suggest MNEs were unprepared for COVID-19's upheaval of production networks. In interviews with corporate executives, *Economist* China editor Simon Rabinovitch found that business leaders had only just begun to consider comprehensive supply chain reviews to reduce reliance on China following months of U.S.-China trade tensions.¹⁵² A mid-February AmCham Shanghai survey found that 61 percent of U.S. companies with manufacturing operations in the Yangtze River Delta area reported not having any contingency plans in place to

* Import lines are products listed as separate items on entry documentation that an importer submits to U.S. Customs and Border Protection. The FDA cautioned that it references import line items because it is unable to calculate the total volume of APIs China manufactures due to complex supply chains and data reporting gaps. U.S. Customs and Border Protection transmits this information to the FDA for those products that are FDA regulated. In testimony before the Commission, Mark Abdo, Associate Commissioner for Global Policy and Strategy at the FDA, stated that approximately 83 percent of Chinese import lines for drugs and biologics were finished drugs, 7.5 percent were APIs, and the remaining 10 percent were animal drugs and medicated animal feed. U.S.-China Economic and Security Review Commission, *Hearing on Exploring the Growing Risks of U.S. Reliance on China's Biotech and Pharmaceutical Products*, written testimony of Mark Abdo, July 31, 2019, 1; *Federal Register*, Submission of Food and Drug Administration Import Data in the Automated Commercial Environment, July 1, 2016. <https://www.federalregister.gov/documents/2016/07/01/2016-15684/submission-offood-and-drug-administration-import-data-in-the-automated-commercial-environment>.

† In testimony before the Commission, Christopher Priest, Chief of Staff at the Defense Health Agency Operations Directorate, stated that the U.S. Department of Defense believes 80 percent of APIs used by pharmaceutical manufacturers to produce finished products come from China. U.S.-China Economic and Security Review Commission, *Hearing on Exploring the Growing U.S. Reliance on China's Biotech and Pharmaceutical Products*, written testimony of Christopher Priest, July 31, 2019, 7.

‡ The majority of the reported manufacturers of these drugs are based in India. Analysts assess that Indian pharmaceutical manufacturers source 70 percent of their APIs from China, a leading supplier of APIs in global supply chains for a range of generic drugs, antibiotics, and other pharmaceutical products. Stephanie Findlay, Hannah Kuchler, and Sarah Neville, "Drugmakers Braced for Coronavirus Disruption to China Supplies," *Financial Times*, February 12, 2020. <https://www.ft.com/content/8630c51c-4cc0-11ea-95a0-43d18ec715f5>.

§ Analysts estimate that Wuhan accounts for roughly 10 percent of China's automotive production capacity, with two of China's four state-owned car manufacturers (Shanghai Automotive Industry Corporation and Dongfeng) operating vehicle production facilities in the city. This has in turn given rise to networks of specialized producers of intermediate inputs into car production, cementing Wuhan's status as a central automotive production hub. See Philippe Jacque, "Wuhan's Drive to Become China's Car City," *Guardian*, April 6, 2015. <https://www.theguardian.com/world/2015/apr/06/wuhan-china-car-automobile-industry>.

respond to the scale of the COVID-19 disruption.¹⁵³ At the global level, a separate 2019 report from the Business Continuity Institute indicated that nearly a quarter of MNEs do not consistently record, measure, and report on supply chain disruptions given the complexity of intricate, multi-level, cross-border manufacturing and assembly networks, and only 27.5 percent identified human illness as a cause for concern in the coming year.¹⁵⁴

Dual Supply and Demand Shocks Shake Market Sentiment

Initial industry impacts sparked by disarray in global supply chains anchored in China are being compounded by reduced demand across global economies. The United Nations Conference on Trade and Development (UNCTAD) notes that the automotive, airlines, and hotels, restaurants, and leisure industries are most negatively affected.¹⁵⁵ On average, the top 5,000 MNEs have reported downward revisions of earnings estimates of 9 percent as of March 8, 2020 (see Table 1).¹⁵⁶

Table 1: Earnings Revisions Reported by UNCTAD Global Top 5,000 MNEs

Sector/Industry	Number of companies with earnings revisions	Average earnings revision (%)
Automobiles and auto parts	142	-44
Airlines	45	-42
Hotels, restaurants, and leisure	111	-21
Consumer cyclicals	671	-16
Basic materials	389	-13
Energy	243	-13
Industrials	739	-9
Utilities	175	-5
Consumer non-cyclicals	351	-4
Technology	358	-3
Healthcare	195	0
Telecommunications services	105	1
Total	3,226	-9

Source: UNCTAD, based on data from Refinitiv SA. UNCTAD, “Investment Trends Monitor,” March 8, 2020, 3. https://unctad.org/en/PublicationsLibrary/diae_gitm34_coronavirus_8march2020.pdf.

China’s Policy Response

China’s policymakers made a trade-off in their preliminary response to COVID-19, shelving economic activity in exchange for stringent control measures to curtail the virus’ spread. Subsequent policy responses have been carefully sequenced and highly targeted to attempt to mitigate the disruptive effects such measures exerted on businesses. Authorities first moved to provide support to small- and medium-sized enterprises (SMEs) most vulnerable to shutdowns as well as those involved in epidemic control efforts. The People’s Bank of China launched a special-purpose relending program that by late February provided \$114.8 billion in discounted financing to designated banks, which they could then relend to eligible companies of their choice.¹⁵⁷ Financial authorities also encouraged banks to tolerate late payments from companies affected by the virus,¹⁵⁸ and pumped more money into the banking system in March through reduced reserve requirement ratios* and medium-term lending facility† rate

* The reserve requirement ratio is the minimum amount of capital banks must hold against outstanding loans.

† The medium-term lending facility is a monetary policy tool used by the PBOC to increase liquidity in the banking system by providing funds with longer maturities (between three months and one year). Bloomberg, “China’s Evolving Toolkit to Manage Monetary Policy,” June 14, 2018. <https://www.bloomberg.com/news/articles/2018-06-14/china-s-evolving-toolkit-to-manage-monetary-policy-quicktake?sref=FIHD1WjR>.

cuts.¹⁵⁹ Authorities have sought to extend the mileage of these targeted monetary policy maneuvers with additional fiscal support, such as temporary cuts to companies' contributions to social security programs and reduced electricity fees.¹⁶⁰

Though these policy responses are beginning to enable a modest recovery in China's economy, Beijing faces new challenges in reduced external demand as COVID-19's global spread deepens, hitting China's export markets. Prospects of continued strain for Chinese firms and corresponding risks of job losses are sparking speculation that Beijing may enact broader stimulus measures to maintain momentum in its economic recovery and lift global growth, as it did in the wake of the global financial crisis. However, Beijing has limited ability to do so without adding to the debt it rapidly accumulated after 2009. According to the Bank for International Settlements, total bank credit surged 229.7 percent from \$6.4 trillion in 2009 to \$21.1 trillion in 2018, about 158.1 percent of GDP.¹⁶¹ This credit was created faster than it could be productively deployed, leading to high levels of debt in China's financial system that became challenging for regulators to control.¹⁶² Analysts estimate that more than half of new credit extended each year is absorbed just by interest payment obligations on existing debt.¹⁶³ These high levels of debt and systemic stress in China's banking sector limit authorities' ability to fall back on monetary stimulus. Credit-led stimulus would also reverse years of slow but steady progress in a campaign to clean up China's fragile financial sector.¹⁶⁴

Instead, Beijing is signaling that future policy responses will remain targeted and err on the side of fiscal support. Though central and local government revenues fell 21.4 percent year-on-year in February,¹⁶⁵ a Politburo meeting chaired by General Secretary Xi Jinping in late March announced plans for raising the fiscal deficit and further expanding the use of local government special purpose bonds.¹⁶⁶ While official readouts on the meeting do not provide granular detail on the scope of these measures, a higher fiscal deficit could ease local governments' revenue stress and provide space to enact more tax cuts, while special purpose bond issuance could enable targeted infrastructure investment. In leaning on such fiscal measures, however, policymakers may redouble state-led economic development approaches and fortify the use of unfair corporate subsidies and other forms of economic malpractice which have long distorted global markets. For example, Executive Vice Premier Han Zheng stated on March 26 that the construction of "new infrastructure" projects such as 5G networks should be accelerated to spur China's post-COVID-19 economic recovery.¹⁶⁷ The Ministry of Industry and Information Technology also signaled in early April that further subsidies supporting the production of electric vehicles may be forthcoming.¹⁶⁸ In targeting next-generation infrastructure investment and providing support for prioritized industries, Beijing is able to advance national development objectives while simultaneously maintaining a limited fiscal response to COVID-19's economic disruptions.

Considerations for Congress

Continuing uncertainties about the severity and duration of COVID-19's global spread and economic disruptions mean any accounting of the impacts to the U.S., Chinese, and world economies will continue to evolve. Regardless, several dynamics warrant early Congressional attention:

- *Global Growth Uncertainty:* Global growth prospects are highly uncertain. On April 14, the International Monetary Fund forecast a global GDP contraction of 3 percent in 2020 (assuming the pandemic subsides in most countries in the second quarter of 2020).¹⁶⁹ Ambiguity in the global economic outlook could lead U.S. firms to delay investment, business expansion, and hiring, while households, fearing continued infection, cut back spending on goods and services. Low business and consumer activity will stall U.S. economic growth.
- *Beijing's Policy Responses to Weakened External Demand:* Chinese policymakers are grappling with how to restore economic activity while avoiding another outbreak. Beijing also contends with a third risk: reduced external demand for Chinese exports. While low global demand may push China's policymakers to resort to broader stimulus measures to forestall further economic weakness—as was done in the global financial crisis—Beijing is limited by already high levels of indebtedness and a stressed financial system. To protect its position, Beijing is falling back on state intervention in its economy to spur growth in prioritized industries, reinforcing the use of distortive economic practices.

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- *Continuing Impact of China Supply Shock on U.S. Production:* Slow and uneven resumption of industrial activity in China will continue to create supply bottlenecks for U.S. producers. Only one-fifth of U.S. firms operating in China reported resumption of normal operations in mid-March, while another fifth anticipates continued delays through April.¹⁷⁰ Disruptions to global shipping and strained air freight capacity will compound these bottlenecks as the transport of intermediate and finished goods out of China to the United States becomes more expensive, elevating production costs. Analysts estimate air freight prices to transport goods out of China to Europe or North America quadrupled in March while the cost of ocean freight rose 20 percent month-on-month.¹⁷¹
 - *Continuing Weakness in Chinese Demand for U.S. Services:* Chinese tourism and spending on U.S. higher education, top U.S. services exports to China, are plummeting as airlines limit service to and from China and university terms are disrupted. Reduced Chinese demand for U.S. tourism will affect U.S. education, hospitality, restaurant, and other leisure industries as travel from China to the United States and spending in the U.S. economy comes to a standstill. Diminished Chinese enrollment in U.S. degree-granting programs, which generated \$15 billion in U.S. services exports to China in 2018,¹⁷² will narrow the U.S. services trade surplus with China, the growth of which was already decelerating in 2018.
 - *Impact of Depressed Oil Prices:* U.S. oil and gas producers will suffer from the downward pressure on global energy prices exacerbated by weakened demand in China. As oil prices fall, U.S. energy producers may hold back on investment in oil and gas projects, leading to reduced production and employment in the sector. Industry consolidation may compound these trends. Separately, investment in renewable energy may also decline, as energy provided by fossil fuels becomes more price competitive.
 - *Disrupted Implementation of Phase One Trade Agreement:* Officials in Washington and Beijing indicate implementation of the Phase One trade agreement will continue as scheduled. However, COVID-19's impact on U.S. exporters and Chinese consumer demand raises the possibility that implementation could be disrupted. While the text of the Phase One agreement makes no specific reference to force majeure exemptions, it includes a clause allowing for consultations "in the event that a natural disaster or other unforeseeable event" delays compliance, potentially providing Beijing the option to stall its purchase commitments.¹⁷³

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