U.S.-China Economic and Security Review Commission

Economics and Trade Bulletin

September 6, 2017

Highlights of This Month's Edition

- **Bilateral trade:** U.S. goods deficit with China reached $33.6 billion in July 2017, a 10.6 percent increase year-on-year, due to robust growth in U.S. imports.
- **Bilateral policy issues:** The USTR launches a Section 301 investigation into China's industrial policies; the United States imposes new secondary sanctions on Chinese companies over their engagement with North Korea.
- **Policy trends in China's economy:** To counter declining inbound foreign investment, China's State Council announces several measures to improve business environment for foreign firms; meanwhile, China's government continues the crackdown on outbound investment by restricting investment into foreign real estate, hospitality, and entertainment sectors; in its annual review of China's economy, the IMF warns China's current credit trajectory is "dangerous."
- **Sector focus – Oil:** U.S. oil exports to China rise markedly amid declining oil production in China and production cuts in other oil-exporting countries.

Contents

Bilateral Trade 2
  U.S. Exports and Imports Experienced Robust Growth in July 2
Bilateral Policy Issues 2
  USTR Launches Wide-Ranging Investigation into China's Industrial Policies 2
  United States Imposes New Secondary Sanctions on Chinese Firms for Aiding North Korea 3
Policy Trends in China's Economy 4
  State Council Pledges to Improve China's Business Environment 4
  China Tightens Restrictions on Outbound Foreign Investment 6
  International Monetary Fund China Article IV Consultation Raises Concerns over China's Debt Levels 7
Sector Focus: U.S. Oil Exports to China Increase Dramatically in 2017 8

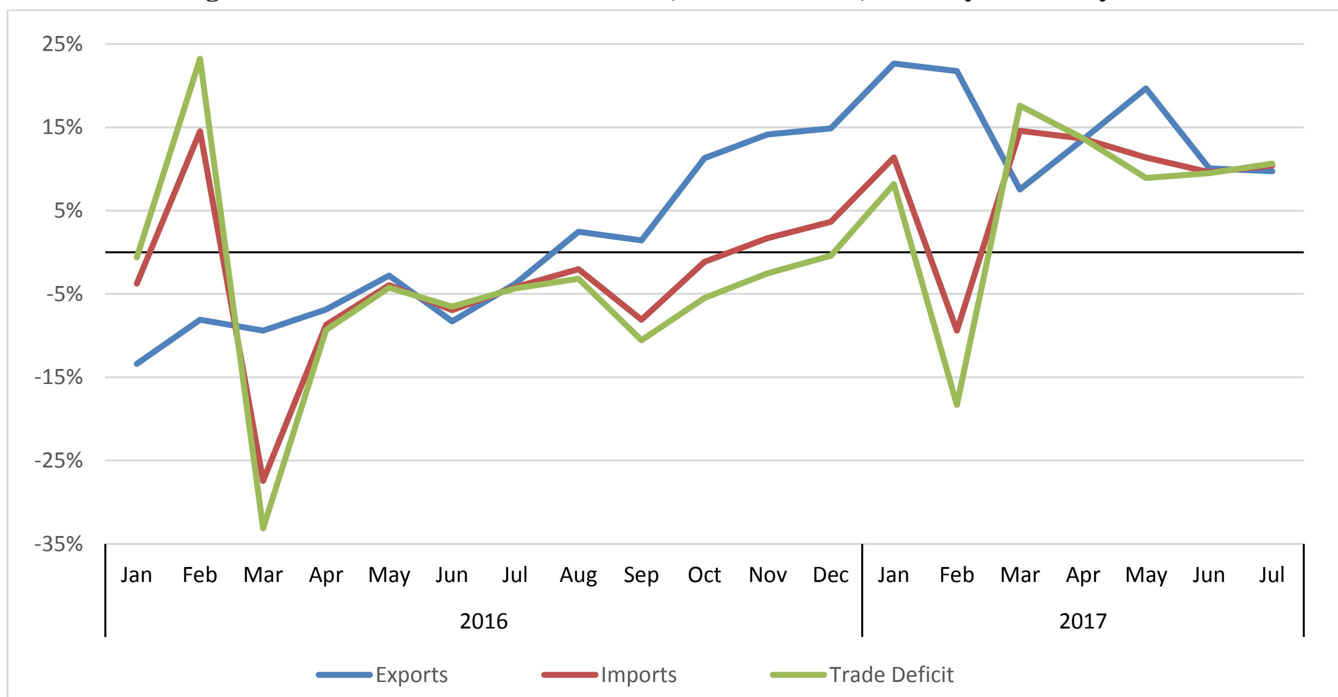
This issue of the Economics and Trade Bulletin *was prepared by Nargiza Salidjanova, Han May Chan, Michelle Ker, Katherine Koleski, Sean O'Connor, and Matt Snyder. For inquiries, please contact us at* contact@uscc.gov.

Bilateral Trade

U.S. Exports and Imports Experienced Robust Growth in July

In July 2017, U.S. goods trade deficit with China rose 10.6 percent year-on-year to reach $33.6 billion, a 3 percent increase over June (see Figure 1).[1] This month, U.S. exports to China increased 9.7 percent year-on-year to reach a seven-year monthly high of $10 billion.[2] Civilian aircraft, engines, and parts, and sorghum, barley, and oats largely contributed to this increase.[3] U.S. imports from China rose 10.4 percent year-on-year to $43.6 billion, with toys, games, sporting goods, and apparel as leading import categories.[4]

Figure 1: U.S. Goods Trade with China, Year-on-Year, January 2016–July 2017



Source: U.S. Census Bureau, *Trade in Goods with China*, September 6, 2017. *https://www.census.gov/foreign-trade/balance/c5700.html.*

Bilateral Policy Issues

USTR Launches Wide-Ranging Investigation into China's Industrial Policies

On August 18, 2017, the Office of the U.S. Trade Representative (USTR) self-initiated an investigation under Section 301 of the U.S. Trade Act of 1974 to determine "whether acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation are unreasonable or discriminatory and burden or restrict U.S. commerce."[5] China's Ministry of Commerce quickly criticized the announcement, stating, "China expresses strong dissatisfaction with the United States' unilateral protectionist action. We urge the U.S. side to respect the facts, ... respect multilateral principles, and act prudently."[6]

The investigation will concentrate on the Chinese government's acts, policies, and practices in four main areas: 1) market access barriers such as opaque regulations and joint venture requirements; 2) imposition of nonmarket terms in licensing and technology-related contracts; 3) state-directed or state-facilitated investment in or acquisition of U.S. companies and assets; and 4) commercial cyberespionage.[*] [7] The USTR has one year to complete the

[*] For more information on China's commercial cyberespionage against U.S. firms, see U.S.-China Economic and Security Review Commission, Chapter 1, Section 4, "Commercial Cyber Espionage and Barriers to Digital Trade in China," in *2015 Annual Report to*

investigation, consult with the Chinese government regarding problematic practices, and, if necessary, develop an action plan for President Donald Trump.[8]

If the USTR finds the Chinese government's acts, policies, and practices are "unreasonable or discriminatory," the USTR has the statutory authority to suspend existing trade agreement concessions, impose duties or other import restrictions on foreign goods and services, withdraw or suspend preferential duty treatments, and enter into binding agreements to address the elimination of problematic acts, policies, or practices.[9] Based on precedent, the USTR would likely challenge these practices at the World Trade Organization (WTO) before taking any unilateral action.[10]

For many years, the U.S. government has criticized China for its unfair market barriers and trade practices—with limited success. The USTR's *2016 Report to Congress on China's WTO Compliance* outlined several major areas of concern, including:

> *serious problems with intellectual property rights enforcement in China, including in the area of trade secrets; the Chinese government's prolific use of industrial policies favoring state-owned enterprises and domestic national champions, including "secure and controllable" information and communications technology (ICT) policies, export restraints, subsidies, unique national standards and investment restrictions, among other policies; troubling agricultural policies that block U.S. market access; numerous continuing restrictions on services market access; and inadequate transparency.*[11]

In addition, China has been on the "Priority Watch List" of the USTR's *Special 301 Report*—which assesses U.S. trading partners' state of intellectual property (IP) protection and enforcement—since the report was first created in 1989.[12] According to the report,

> *China is home to widespread infringing activity, including trade secret theft, rampant online piracy and counterfeiting, and high levels of physical pirated and counterfeit exports to markets around the globe. China imposes requirements that U.S. firms develop their IP in China or transfer their IP to Chinese entities as a condition to accessing the Chinese market. China also requires that mandatory adverse terms be applied to foreign IP licensors, and requires that U.S. firms localize research and development activities.*[13]

In the 2016 fiscal year alone, China accounted for 52 percent of counterfeit goods seizures by U.S. Customs and Border Protection.[14]

In 2010, the USTR pursued a Section 301 case focused on China's green technology industrial policies. The labor union United Steel Workers filed a Section 301 petition with the USTR in September 2010 to challenge China's restrictions on critical materials access, subsidies based on export performance and domestic content, discrimination against imported goods and foreign firms in China, and technology transfer requirements for foreign investors for its green technology sector.[15] The USTR subsequently conducted an investigation and found that China's subsidization of wind power equipment manufacturers violated its WTO obligations.[16] After WTO consultations, China eliminated its domestic content subsidies for wind power equipment manufacturers.[17]

United States Imposes New Secondary Sanctions on Chinese Firms for Aiding North Korea

On August 22, 2017, the U.S. government imposed the fifth and largest set of secondary sanctions related to the Democratic People's Republic of Korea (DPRK, or North Korea) this year, in a gradual effort to increase pressure on Pyongyang to halt its nuclear and ballistic missile programs.[18] The new sanctions, consistent with the latest UN Security Council Resolution (UNSCR),[*] are aimed at punishing entities and individuals that defy sanctions by enabling North Korea to generate income to fund their nuclear and ballistic missiles program, to isolate them from the U.S. financial system, and to deter them from violating sanctions in the future.[19]

Congress, November 2015. *https://www.uscc.gov/sites/default/files/Annual_Report/Chapters/Chapter%201%2C%20Section%204%20-%20Commercial%20Cyber%20Espionage%20and%20Barriers%20to%20Digital%20Trade%20in%20China.pdf*.

[*] UNSCR 2371 authorizes a full ban on coal, iron, and iron ore trade, and adds lead and lead ore to the banned commodities list; authorizes designating vessels of related activities and prohibits port calls by designated vessels and chartering DPRK vessels; bans hiring and paying additional DPRK laborers used to generate foreign export earnings; prohibits importing North Korean seafood products; and expands financial sanctions by prohibiting new or joint ventures and cooperative commercial entities with the DPRK.

The U.S. Department of the Treasury's Office of Foreign Assets Control (OFAC) added ten companies and six individuals to its sanctions list.[20] The sanctioned entities include five China-based companies, two Singapore-based companies, one Moscow-based company, one Namibian company under North Korean control, and one Namibian subsidiary of a Chinese company.[21] The sanctioned individuals include managing directors, main shareholders, or representatives of these companies.[22] Except for one North Korean national, they are mostly Chinese and Russian nationals.[23]

According to the Treasury, North Korea generates about $1 billion in revenue per year from coal trade, the country's biggest export.[24] Overseas laborers' income is another important source of revenue for the North Korean government.[25] The new set of secondary sanctions primarily targets third-country entities and persons that engage in North Korea's energy trade, facilitate North Korea's labor export industry, assist sanctioned individuals in supporting North Korea's weapons programs, and enable sanctioned North Korean entities to gain access to U.S. and international financial systems.[26]

Among other things, sanctioned entities were accused of purchasing coal from North Korea and purchasing petroleum products for North Korea, providing financial services to and conducting U.S. dollar transactions on behalf of North Korea's primary foreign exchange bank, acting as front companies for North Korean entities to launder money via the U.S. financial system for gas, oil and coal transactions, collaborating with sanctioned entities to use revenue from North Korean exports to purchase nuclear and missile components for North Korea, and arranging for North Korean laborers to work overseas.[27] Sanctioned individuals were accused of being involved in the abovementioned activities, as well as for operating networks of front companies to facilitate transactions using the U.S. financial system on behalf of North Korean entities.[28]

China is North Korea's biggest trading partner, accounting for more than 90 percent of North Korea's total trade volume, and its main source of food and energy supplies.[29] The bilateral trade between China and North Korea has been steadily increasing in the past two decades, drawing attention to Chinese businesses working with North Korean entities.[30]

In response to the latest set of secondary sanctions, the Chinese Embassy said China opposes unilateral sanctions outside the framework of the UNSCRs, especially the "long-arm jurisdiction" imposed by other countries over Chinese entities and individuals based on foreign countries' own domestic laws.[31] Chinese authorities argue they have fully implemented UNSCRs on North Korea and would investigate and punish those caught violating the UN sanctions according to Chinese law.[32] China urged withdrawal of these secondary sanctions, and argued for restraint and dialogue.[33]

Meanwhile, North Korea continued to ratchet up tensions with a series of provocative actions. On August 29, 2017, by firing a ballistic missile over Japan and warning that this launch was "the first step of the military operation of the [North Korean military] in the Pacific and a meaningful prelude to containing Guam."[34] On August 31, 2017, the United States flew its most advanced jet fighters and bombers over the Korean peninsula alongside South Korean and Japanese jet fighters in a show of force in response to North Korea's provocation and threat.[35] On September 3, 2017, North Korea conducted its sixth nuclear test, estimated to be four to sixteen times more powerful than any North Korea tested before.[36] In response, Washington warned that the threat to use such a weapon against the United States and its allies "will be met with a massive military response."[37] While supporting Washington's push for "maximum pressure and sanctions against North Korea," Seoul also pushed for dialogue with North Korea, arguing that sanctions and pressure alone have failed and there must be a peaceful solution because South Koreans, not Americans, would bear the brunt of war.[38]

Policy Trends in China's Economy

State Council Pledges to Improve China's Business Environment

In an effort to attract more foreign direct investment (FDI), on August 16 China's State Council issued a series of measures designed to improve China's business environment for foreign firms. Details or implementation timetables for these measures were not provided, and most of the measures task other agencies to develop plans to

improve China's business climate, indicating their benefit to foreign firms will hinge heavily on implementation by other authorities.

Many of these measures appear designed to attract foreign firms in high-tech sectors (such as new energy vehicles) or to encourage foreign firms to conduct research and innovation in China. Meanwhile, measures such as improvement of China's visa process may complement other efforts the Chinese government has made to attract foreign talent, including relaxing Chinese residency rules for foreign students and researchers.[39]

The State Council's measures also appear to be aimed at addressing growing concerns among foreign businesses regarding China's worsening investment environment. In the American Chamber of Commerce in China's (AmCham China) 2016 business climate survey, 81 percent of surveyed U.S. businesses stated they felt less welcome in China in 2016 than in 2015, and only 24 percent felt China's overall business environment is improving.[40] Declining FDI inflows bear out these negative perceptions: according to China's Ministry of Commerce, foreign investment in China was down 1.2 percent year-on-year in the first half of 2017.[41]

New FDI-boosting measures include:

- **Opening sectors to investment:** The State Council indicated China would begin to allow foreign investment in new energy vehicles, ship design, and aircraft maintenance.[*] It also promised to develop plans for opening the banking, financial securities, insurance, passenger rail, and gas station sectors to foreign investment.[42] The extent to which U.S. business benefit will rely on implementation—many sectors are officially open to foreign firms but require them to assume a junior position in a Chinese joint venture.[43] Previous pledges to open sectors to investment have resulted in modest outcomes. For example, in January 2017 the State Council promised to open the banking, securities, and insurance sectors to foreign firms, but provided no timetable for doing so.[44] Under the 100-day action plan announced at the April 2017 summit between President Trump and Chinese President and General Secretary of the Chinese Communist Party Xi Jinping, China promised to allow wholly owned foreign financial firms to provide credit rating services in China.[45] China also committed to begin granting licenses for U.S. firms to provide electronic payments, albeit through a slow, multiyear process.[46] Restrictions on investment in high-energy batteries for new energy vehicles were dropped in June 2017 under China's new investment catalogue.[47]
- **Tax incentives for foreign firms:** The list of measures calls for local governments to introduce tax and financial policies to encourage foreign firms to establish headquarters in China.[48] It also directs local governments to create preferential income tax policies for foreign high-tech and high-value-added services firms investing in China.[49]
- **Improved IP protection:** The State Council directed China's IP regulators to strengthen and increase enforcement of legal protection for IP rights.[50] It also called for stiffer penalties for violations of IP rights.[51] While China has introduced dedicated courts for IP cases—a move that appears to have resulted in higher penalties for violators—U.S. firms continue to cite poor IP enforcement as a risk of doing business in China.[52] In AmCham China's 2016 survey, U.S. firms most frequently cited lack of sufficient IP protection as a barrier to innovation in China.[53]
- **Easier work visas and improved remittances:** The measures promise to allow foreign businesses to transfer remittances from their operations in China out of the country without restriction.[54] Foreign business associations have noted that China's crackdown on outbound capital flows has made it difficult to transfer money out of China (for more on China's restrictions on outbound investments, see "China Tightens Restrictions on Outbound Foreign Investment" later in this bulletin).[55] The State Council also pledged to provide more convenient procedures for foreign work permits and visas as well as better systems to respond to complaints raised by foreign firms.[56]

[*] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.

China Tightens Restrictions on Outbound Foreign Investment

As part of the Chinese government's continuing efforts to control capital outflows, on August 4 China's State Council issued a statement restricting Chinese outbound FDI in sectors such as real estate, hospitality, and entertainment.[57] In an effort to direct China's FDI toward the government's strategic goals, the State Council also identified several sectors that would be favored the Chinese government and receive preferential treatment, such as outbound FDI related to China's "One Belt One Road" (OBOR) initiative.[58] According to Lester Ross, a Beijing-based lawyer at Wilmer Hale, Chinese outbound investments that do not fall under any of these categories will be treated ordinarily under a normal review process. Outbound investment will fall into one of three categories:

- **Restricted:** Chinese investment to these sectors will face greater government scrutiny; in practice, projects associated with these sectors will likely be blocked.[59] Restricted sectors include real estate, hotels, movie theaters, the entertainment industry, and sports teams. Investment into platforms without tangible industrial projects, involving outdated industrial technology, or to countries without diplomatic relations to China or that are deemed politically sensitive by the Chinese government will likewise be restricted.[60]
- **Encouraged:** Outbound investment to these sectors supports China's strategic goals and will likely receive preferential treatment, including financial support from Chinese banks and an accelerated review process.[61] Encouraged investment includes infrastructure projects associated with China's OBOR initiative; projects that export China's excess industrial capacity or promote Chinese technological standards, support exports of Chinese high-tech products, result in partnerships with foreign high-tech advanced manufacturing firms, and secure overseas energy and mineral resources; and investment in overseas agricultural, animal husbandry, and fish resources.[62]
- **Prohibited:** Chinese outbound investment in this category is regarded as contrary to China's national interests and will not be allowed. This includes investments relating to gambling or pornography, investments banned under China's treaty obligations, investments that facilitate export of Chinese defense industry products, and investments that assist the export of prohibited technologies, artwork, and products. This category also includes all investments that may impede China's national security or interests.[63]

These measures are the latest in a series of Chinese government restrictions on outbound capital flows and investment. In March, China's Minister of Commerce Zhong Shan criticized Chinese businesses for engaging in "blind and irrational investment" overseas.[64] Governor of the People's Bank of China Zhou Xiaochuan similarly castigated outbound FDI, noting that acquisition in "sports, entertainment, and clubs ... didn't bring much benefit to China and caused some complaints overseas."[65] Since January 2017, China has taken steps to control Chinese outbound investment—it has placed limits on the amount of renminbi (RMB) Chinese banks can convert into foreign currency, and held up approval for foreign acquisitions by engaging in stalling tactics such as continuous bureaucratic reviews.[66] The Chinese government has also introduced a list of sectors off-limits to outbound state-owned enterprise (SOE) investment.[67] According to Andrew Polk, an economist at the consulting firm Trivium China, the Chinese government is in the process of codifying many of the restrictions it has put in place this year.[68]

China's restrictions have significantly decreased outbound investment this year. While Chinese investment reached an all-time high of $170 billion in 2016, in the first half of 2017 China's outbound nonfinancial investment fell to only $57 billion, a 45 percent decline from $103 billion over the same period last year.[69]

The State Council's prohibition on investment in the real estate, entertainment, and hospitality sectors will significantly impact Chinese investment in the United States. According to Rhodium Group, in 2016 the entertainment sector accounted for more than 10 percent of all Chinese investment in the United States, and the hospitality and real estate sector accounted for 38 percent.[70] Several Chinese entertainment acquisitions fell through due to difficulties withdrawing money out of China or from pressure by Chinese authorities. For example, in February 2017, a failure to secure permission to transfer currency overseas caused Dalian Wanda to withdraw its $1 billion offer for U.S. entertainment firm Dick Clark Productions and Chinese copper firm Anhui Xinke New Materials suspended its $350 million bid for Voltage Pictures in late 2016 following news that Chinese regulators would scrutinize entertainment sector acquisitions.[71]

International Monetary Fund China Article IV Consultation Raises Concerns over China's Debt Levels

In its annual review of China's economy (the so-called Article IV Consultation report),[*] the International Monetary Fund (IMF) noted China's "near-term growth outlook has firmed," but "at the cost of further large and continuous increases in private and public debt ... thus increasing downside risks in the medium term."[†] [72] The IMF recommended China further boost consumption, accelerate SOE reform, and intensify deleveraging efforts to ensure sustainable growth.[73] Key issues raised in the IMF report include:

- **Credit-enabled growth has increased downside risks:** IMF staff revised their forecast for China's 2017 gross domestic product (GDP) growth to 6.7 percent, up from 6.2 percent in last year's Article IV consultation, to reflect "momentum from last year's policy support and strengthening external demand."[74] Given China's penchant for relying on stimulus and credit expansion to maintain growth, the IMF expects China will meet its target of doubling 2010 GDP by 2020, with GDP growth averaging 6.4 percent between 2018 and 2020, compared with the IMF's earlier estimate of 6 percent.[75] As a result, however, China's total nonfinancial sector debt—which includes corporate, government, and household debt—is projected to exceed 290 percent of GDP by 2022, compared with 235 percent in 2016.[76] While about two-thirds of China's debt is held by nonfinancial corporations, household debt levels are also rising. According to the IMF, household debt climbed from less than 20 percent of GDP in 2008 to more than 40 percent in 2016, with mortgages making up more than half of outstanding household debt.[77] Higher debt levels would limit Beijing's "fiscal space"[‡] to respond to a potential crisis in the interbank market or a loss of confidence in the wealth management product market.[78] The IMF also warned that "[i]nternational experience suggests that China's current credit trajectory is dangerous, with increasing risks of a disruptive adjustment and/or a marked growth slowdown."[§]

- **Limited and slow implementation of SOE reform:** Despite enjoying substantial state support,[**] SOEs are less productive and profitable than private sector firms, and SOE reform is critical for reducing China's debt vulnerabilities and raising economy-wide productivity.[79] The IMF criticized China for making little headway on SOE reform, noting that "[a]ctual increases in private sector participation in SOEs remain limited" and the recent elevation of Chinese Communist Party committees within SOEs has "institutionalized" political influence.[80] Meanwhile, SOE leverage has grown to an average of over 200 percent of GDP, and SOEs account for half of debt outstanding from nonviable companies.[81] In addition to accelerating existing reforms, the IMF recommended the "SOE reform agenda also be broadened to include hardening budget constraints on SOEs by phasing out implicit subsidies on factor inputs and forcing non-viable firms to default and exist if market forces warrant."[82]

- **China needs to boost consumption further:** In the "Selected Issues" supplement to the Article IV Consultation report, the IMF noted that China's high level of national savings—estimated at 46 percent of GDP, compared to the global average of 25 percent of GDP—contributes to the country's excessive

[*] Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral consultations (known as "Article IV consultations")—generally on an annual basis—with member countries to assess each country's economic health, and produces a report summarizing its findings.

[†] For a summary of the IMF's 2016 China Article IV Consultation report, see U.S.-China Economic and Security Review Commission, *Economic and Trade Bulletin*, September 2, 2016, 3–4. *https://www.uscc.gov/sites/default/files/trade_bulletins/Sept%202016%20Trade%20Bulletin.pdf*.

[‡] The IMF defines fiscal space as "the ability of a government to raise spending or lower taxes without endangering market access and debt sustainability." International Monetary Fund, "Assessing Fiscal Space: An Initial Consistent Set of Considerations," December 2016, 1. *https://www.imf.org/en/News/Articles/2016/12/15/PR16560-IMF-Paper-Lays-Out-Framework-to-Assess-Fiscal-Space*.

[§] In the IMF's examination of 43 cases of credit booms where the credit-to-GDP ratio grew by more than 30 points over a five-year period, only five were not followed by a financial crisis or major growth slowdown. International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation: Selected Issues," August 2017, 18. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-Selected-Issues-45171*.

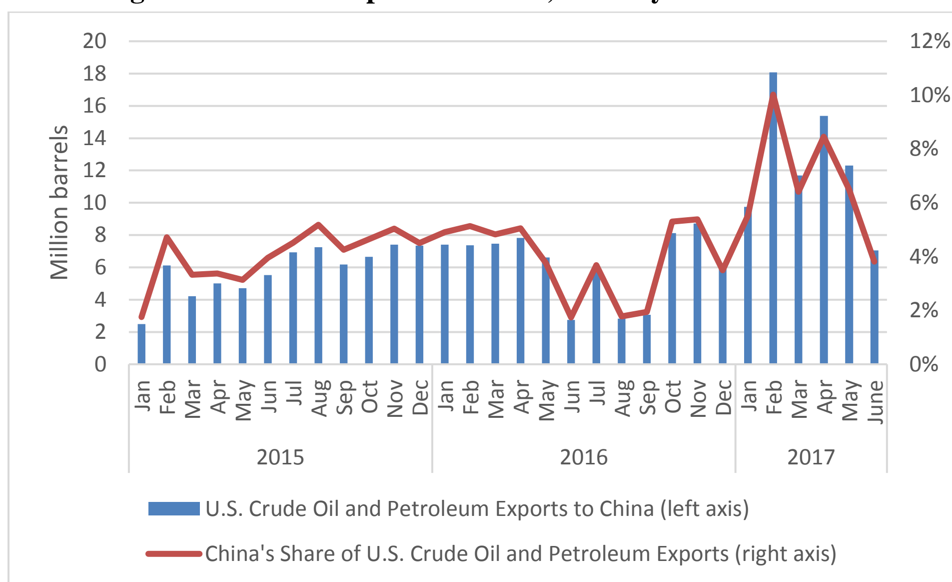
[**] The IMF estimates the implicit support SOEs receive from the state (e.g., credit and land) amounts to about 3 percent of GDP. International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 15. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.

investment and debt.[83] Households are the primary driver of China's national savings, reflecting rising income inequality and an inadequate social safety net.[84] The IMF recommended China adopt targeted policy measures to boost consumption further, including a more progressive tax system, increased social transfers to lower-income households, and increased government spending on education, healthcare, and pensions.[85]

Sector Focus: U.S. Oil Exports to China Increase Dramatically in 2017

U.S. oil exports to China spiked in the first half of 2017, with more than 74 million barrels exported over the six-month period.[86] That represents an 88.3 percent increase from the same period in 2016, according to data from the U.S. Energy Information Administration.[87] As seen in Figure 2, China accounted for a 10 percent share of total U.S. oil exports in February 2017, before falling to a 3.8 percent share in June.[88] China, which is the world's largest importer and consumer of crude oil, surpassed Canada as the biggest buyer of U.S. oil in February 2017.[89] The United States, meanwhile, was China's 11th-largest source of crude imports through the first seven months of 2017, according to data from China's General Administration of Customs (Russia, Angola, and Saudi Arabia are China's three largest sources of oil imports).[90]

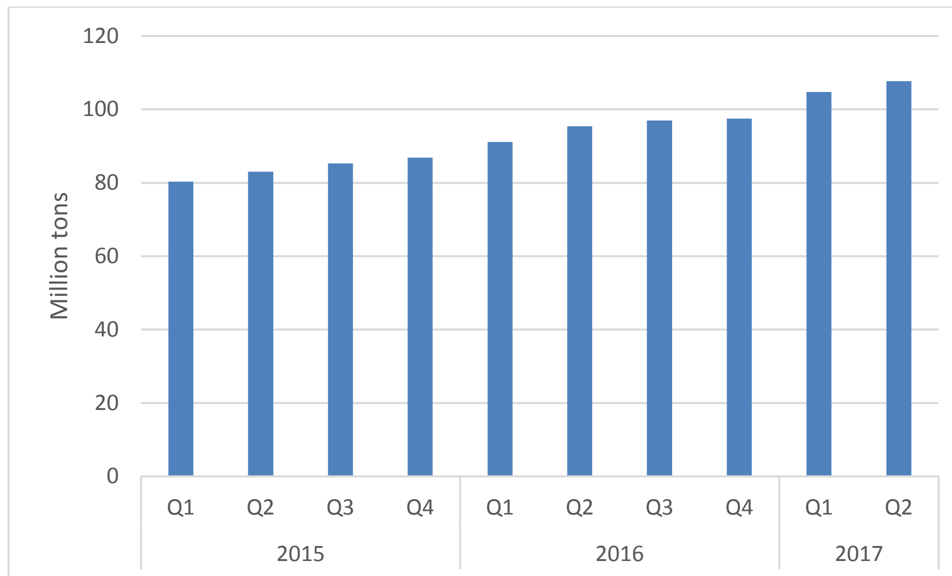
Figure 2: U.S. Oil Exports to China, January 2015–June 2017



Source: U.S. Energy Information Administration, *U.S. Exports to China of Crude Oil and Petroleum Products*, June 2017. *http://tonto.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTEXCH1&f=M*.

Decreased oil field production in China has forced Beijing to increase its global crude oil imports. From January to March 2017, Chinese oil production fell 8 percent as lower commodity prices forced many of China's aging, high-cost oil fields to shut down.[91] According to the National Development and Reform Commission, by 2020 China's oil production is estimated to decline by 7 percent from 2016 levels.[92] To offset the loss in domestic production, China imported a total of 37.2 million tons of crude petroleum in May 2017, a 15.4 percent increase year-on-year.[93] In the first half of 2017, China imported more than 210 million tons of oil, a 13.9 percent increase year-on-year (see Figure 3).[94] By 2020, China is expected to import 12 million barrels a day of crude oil (80 percent of China's estimated future demand for crude oil), up from 7.6 million barrels in 2016.[95]

Figure 3: China Global Crude Oil Imports, Q1 2015–Q2 2017



Source: General Administration of Customs via CEIC database.

China is also increasing its oil imports to expand the country's strategic petroleum reserve (SPR). Beijing began stockpiling oil products a decade ago to ensure a steady supply of crude, which it views as vital for the country's economic growth.[96] The size of China's SPR is based on third-party estimates because the Chinese government does not publicly disclose information about its strategic stockpile. In May 2016, the satellite imaging firm Orbital Insight approximated Chinese SPR inventories at around 600 million barrels of crude oil, compared with 301 million barrels at the end of 2015.[*] [97] Meanwhile, China's commercial petroleum inventory, which unlike the SPR is reported by Chinese state media, rose by 5 percent year-on-year in the first eight months of 2017 to nearly 350 million barrels.[98]

The United States in particular has benefitted from China's increasing oil imports. In 2015, the United States ended a 40-year ban on crude oil exports, making the United States a global player in oil markets just as rising shale production pushed down the cost of U.S. crude oil below $40 a barrel.[99] In 2017, the price of U.S. oil has increased to around $50 a barrel, yet it has remained cheaper per barrel on average than Dubai and Brent crude; as of August 2017, U.S. crude oil was nearly $3 cheaper than Dubai crude and nearly $5 cheaper than Brent crude on a per barrel basis.[100] U.S. oil producers also continue to cut costs by refining hydraulic fracturing, horizontal drilling, and other innovative techniques to access shale reserves in Texas and North Dakota, allowing them to remain competitive with other oil producers.[101]

The United States has been able to increase its share of the global oil market as the Organization of the Petroleum Exporting Countries (OPEC) and other oil exporters attempt to cut production and end the oil glut that is suppressing global prices.[102] In November 2016, 21 oil-exporting countries—including OPEC members and Russia—agreed to cut their oil production by a combined 1.8 million barrels a day from October 2016 levels.[103] In June 2017, these countries reaffirmed their efforts to cut production.[104] Meanwhile, the United States increased its production by around 750,000 barrels of oil per day between November 2016 and May 2017.[105] As of May 2017, the United States was producing 9.3 million barrels of oil a day, the highest output since the summer of 2015.[106] According to the U.S. Energy Information Administration, U.S. global oil output is on pace to exceed 9.9 million barrels a day by 2018—a record.[107]

For U.S. oil exports to China to continue to increase, however, prices will need to remain cheap enough to offset the higher transportation time and cost of U.S. exports. It takes approximately six weeks for oil to reach China from the Gulf Coast (where U.S. exports are shipped from), compared to just three weeks for shipments from the Middle East.[108] Moreover, larger oil tankers are needed to transport U.S. oil in order to boost economies of scale and lower

[*] As of August 2017, the inventory of the United States' SPR stands at around 680 million barrels. U.S. Department of Energy, *Strategic Petroleum Reserve Inventory. https://www.spr.doe.gov/dir/dir.html.*

transportation costs, necessitating upgrades of U.S. ports to allow larger tankers to load directly from the dock.[109] U.S. producers must also work to assure Chinese refiners that U.S. crude is suitable for their plants, which were built to process heavier grades of oil than U.S. shale.[110] Despite these challenges, Wang Yilin, the chairman of China's largest oil and gas producer China National Petroleum Corp, indicated China will continue looking to the United States for oil, saying, "The U.S. has very rich oil and gas resources, and as China pursues a diversification of its crude supplies the U.S. will of course be one of the sources."[111]

Disclaimer: The U.S.-China Economic and Security Review Commission was created by Congress to report on the national security implications of the bilateral trade and economic relationship between the United States and the People's Republic of China. For more information, visit *www.uscc.gov* or join the Commission on Facebook!

This report is the product of professional research performed by the staff of the U.S.-China Economic and Security Review Commission, and was prepared at the request of the Commission to support its deliberations. Posting of the report to the Commission's website is intended to promote greater public understanding of the issues addressed by the Commission in its ongoing assessment of U.S.-China economic relations and their implications for U.S. security, as mandated by Public Law 106-398 and Public Law 113-291. However, it does not necessarily imply an endorsement by the Commission, any individual Commissioner, or the Commission's other professional staff, of the views or conclusions expressed in this staff research report.

Endnotes

[1] U.S. Census Bureau, *Trade in Goods with China,* June 2, 2017. *https://www.census.gov/foreign-trade/balance/c5700.html.*
[2] U.S. Census Bureau, *Trade in Goods with China,* June 2, 2017. *https://www.census.gov/foreign-trade/balance/c5700.html.*
[3] U.S. Census Bureau and U.S. Bureau of Economic Analysis, *U.S. International Trade in Goods and Services*, June 2, 2017, 2. *https://www.census.gov/foreign-trade/statistics/highlights/images/Congressional.pdf*.
[4] U.S. Census Bureau and U.S. Bureau of Economic Analysis, *U.S. International Trade in Goods and Services*, June 2, 2017, 2. *https://www.census.gov/foreign-trade/statistics/highlights/images/Congressional.pdf*; *U.S. Census Bureau, Trade in Goods with China*, *June 2, 2017.* https://www.census.gov/foreign-trade/balance/c5700.html.
[5] Office of the U.S. Trade Representative, *USTR Announces Initiation of Section 301 Investigation of China*, August 18, 2017. *https://ustr.gov/about-us/policy-offices/press-office/press-releases/2017/august/ustr-announces-initiation-section*.
[6] Michael Martina, "China Calls U.S. Intellectual Property Probe 'Irresponsible,'" Reuters, August 21, 2017. *https://www.reuters.com/article/us-usa-trump-trade-china-idUSKCN1B10MF*.
[7] Office of the U.S. Trade Representative, *Initiation of Section 301 Investigation; Hearing; and Request for Public Comments: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, USTR-2017-0016. *https://ustr.gov/sites/default/files/301/FRN%20China%20301.pdf*.
[8] Office of the U.S. Trade Representative, *Initiation of Section 301 Investigation; Hearing; and Request for Public Comments: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, USTR-2017-0016. *https://ustr.gov/sites/default/files/301/FRN%20China%20301.pdf*.
[9] Office of the U.S. Trade Representative, *Section 301*, February 6, 2017. *http://trade.gov/mas/ian/tradedisputes-enforcement/tg_ian_002100.asp*; Office of the U.S. Trade Representative, *Trade Enforcement Activities*, December 21, 2016, 174–175. *https://ustr.gov/sites/default/files/files/reports/2017/AnnualReport/Chapter%20V%20-%20Trade%20Enforcement%20Activities.pdf*.
[10] William Clinton et al., "Possible Unilateral Actions under US Law," *White & Case*, January 13, 2017. *https://www.whitecase.com/publications/article/possible-unilateral-actions-under-us-law*.
[11] Office of the U.S. Trade Representative, *2016 Report to Congress on China's WTO Compliance*, January 2017, 4. *https://ustr.gov/sites/default/files/2016-China-Report-to-Congress.pdf*.
[12] Office of the U.S. Trade Representative, *Fact Sheet: "Special 301" on Intellectual Property*, May 25, 1989. *https://ustr.gov/sites/default/files/1989%20Special%20301%20Report.pdf*; Office of the U.S. Trade Representative, *2014 Special 301 Report*, April 2014, 2. *https://ustr.gov/sites/default/files/USTR%202014%20Special%20301%20Report%20to%20Congress%20FINAL.pdf*; Office of the U.S. Trade Representative, *2015 Special 301 Report*, April 2015, 2. *https://ustr.gov/sites/default/files/2015-Special-301-Report-FINAL.pdf*; Office of the U.S. Trade Representative, *2016 Special 301 Report*, April 2016, 3. *https://ustr.gov/sites/default/files/USTR-2016-Special-301-Report.pdf*; Office of the U.S. Trade Representative, *2017 Special 301 Report*, April 2017, 5. *https://ustr.gov/sites/default/files/301/2017%20Special%20301%20Report%20FINAL.PDF*; Office of the U.S. Trade Representative, *2017 Special 301 Report*, April 2017, 5. *https://ustr.gov/sites/default/files/301/2017%20Special%20301%20Report%20FINAL.PDF*.
[13] Office of the U.S. Trade Representative, *2017 Special 301 Report*, April 2017, 1. *https://ustr.gov/sites/default/files/301/2017%20Special%20301%20Report%20FINAL.PDF*.

[14] U.S. Department of Homeland Security, Customs and Border Protection, *Intellectual Property Rights Seizure Statistics Fiscal Year 2016*, *https://www.cbp.gov/sites/default/files/assets/documents/2017-Jan/FY%2016%20IPR%20Stats%20FINAL%201.25.pdf*.

[15] William Clinton et al., "Possible Unilateral Actions under US Law," *White & Case*, January 13, 2017. *https://www.whitecase.com/publications/article/possible-unilateral-actions-under-us-law*; United Steelworkers, "United Steelworkers' Section 301 Petition Demonstrates China's Green Technology Practices Violate WTO Rules." *http://assets.usw.org/releases/misc/section-301.pdf*.

[16] Office of the U.S. Trade Representative, *Trade Enforcement Activities*, 2011, 175–176. *https://ustr.gov/sites/default/files/Chapter%20V.%20Trade%20Enforcement%20Activities.pdf*; William Clinton et al., "Possible Unilateral Actions under US Law," *White & Case*, January 13, 2017. *https://www.whitecase.com/publications/article/possible-unilateral-actions-under-us-law*; Office of the U.S. Trade Representative, *China Ends Wind Power Equipment Subsidies Challenged by the United States in WTO Dispute*. *https://ustr.gov/about-us/policy-offices/press-office/press-releases/2011/june/china-ends-wind-power-equipment-subsidies-challenged*.

[17] Office of the U.S. Trade Representative, *Trade Enforcement Activities*, 2011, 175–176. *https://ustr.gov/sites/default/files/Chapter%20V.%20Trade%20Enforcement%20Activities.pdf*; William Clinton et al., "Possible Unilateral Actions under US Law," *White & Case*, January 13, 2017. *https://www.whitecase.com/publications/article/possible-unilateral-actions-under-us-law*; Office of the U.S. Trade Representative, *China Ends Wind Power Equipment Subsidies Challenged by the United States in WTO Dispute*. *https://ustr.gov/about-us/policy-offices/press-office/press-releases/2011/june/china-ends-wind-power-equipment-subsidies-challenged*.

[18] Tom Schoenberg, Greg Farrell, and Joe Sobczyk, "U.S. Expands North Korea Sanctions, Seeks to Seize Millions," Bloomberg, August 22, 2017. *https://www.bloomberg.com/news/articles/2017-08-22/treasury-sanctions-russian-chinese-companies-over-north-korea*; Gardiner Harris and Eileen Sullivan, "Tillerson Suggests North Korea May Soon Be Ready for Talks," *New York Times*, August 22, 2017. *https://www.nytimes.com/2017/08/22/world/asia/us-imposes-sanctions-on-china-and-russia-over-north-koreas-nuclear-program.html*; *Straits Times*, "US Sanctions Chinese, Singapore-Based Firms over North Korea Support," August 22, 2017. *http://www.straitstimes.com/world/united-states/us-sanctions-chinese-russians-over-north-korea-support*.

[19] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; United Nations Security Council, "United Nations Security Council Resolution 2371," August 5, 2017. *https://www.un.org/sc/suborg/en/sanctions/1718/resolutions*; *http://www.un.org/ga/search/view_doc.asp?symbol=S/RES/2371%282017%29*; *https://www.un.org/sc/suborg/en/sanctions/1718/resolutions*.

[20] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Alex Ward, "The US Sanctioned China So It Would Help with North Korea. China Defended Pyongyang Instead," Vox Media, August 23, 2017. *https://www.vox.com/world/2017/8/23/16189170/china-sanctions-north-korea-russia-mnuchin-trump-august-22-2017*; Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*; Tom Schoenberg, Greg Farrell, and Joe Sobczyk, "U.S. Expands North Korea Sanctions, Seeks to Seize Millions," Bloomberg, August 22, 2017. *https://www.bloomberg.com/news/articles/2017-08-22/treasury-sanctions-russian-chinese-companies-over-north-korea*; Gardiner Harris and Eileen Sullivan, "Tillerson Suggests North Korea May Soon Be Ready for Talks," *New York Times*, August 22, 2017. *https://www.nytimes.com/2017/08/22/world/asia/us-imposes-sanctions-on-china-and-russia-over-north-koreas-nuclear-program.html*.

[21] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Lee Haye-ah, "U.S. Sanctions China, Russia Entities, Individuals over N. Korea's Nuclear Program," Yonhap News Agency, August 23, 2017. *http://english.yonhapnews.co.kr/northkorea/2017/08/22/0401000000AEN20170822011254315.html*.

[22] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Lee Haye-ah, "U.S. Sanctions China, Russia Entities, Individuals over N. Korea's Nuclear Program," Yonhap News Agency, August 23, 2017. *http://english.yonhapnews.co.kr/northkorea/2017/08/22/0401000000AEN20170822011254315.html*.

[23] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Lee Haye-ah, "U.S. Sanctions China, Russia Entities, Individuals over N. Korea's Nuclear Program," Yonhap News Agency, August 23, 2017. *http://english.yonhapnews.co.kr/northkorea/2017/08/22/0401000000AEN20170822011254315.html*.

[24] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Zachary Cohen, "US Targets Chinese, Russian Entities funding North Korea's Nukes," CNN Politics, August 22, 2017. *http://www.cnn.com/2017/08/22/politics/us-treasury-sanctions-china-russia-north-korea/index.html*.

[25] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Carol Morello and Peter Whoriskey, "China Hits Chinese and Russian Companies, Individuals with Sanctions for Doing Business with North Korea," *Washington Post*, August 22, 2017. *https://www.washingtonpost.com/world/national-security/us-sanctions-chinese-and-russian-companies-and-individuals-for-conducting-business-with-north-korea/2017/08/22/78992312-8743-11e7-961d-2f373b3977ee_story.html?utm_term=.2c9bc429c4cd*.

[26] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; NPR Morning Edition, "Trump

Administration Unveils Sanctions to Curb North Korea's Weapons Program," August 22, 2017. *http://www.npr.org/sections/thetwo-way/2017/08/22/545359332/trump-administration-unveils-new-sanctions-to-curb-north-korea-s-weapons-program*; Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*; Tom Schoenberg, Greg Farrell, and Joe Sobczyk, "U.S. Expands North Korea Sanctions, Seeks to Seize Millions," Bloomberg, August 22, 2017. *https://www.bloomberg.com/news/articles/2017-08-22/treasury-sanctions-russian-chinese-companies-over-north-korea*.

[27] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Simon Denyer, "China Demands U.S. Immediately Withdraw N. Korea Sanctions, Warns They Will Damage Ties," *Washington Post*, August 23, 2017. *https://www.washingtonpost.com/world/china-bristles-at-us-imposed-sanctions-on-north-korea-trade/2017/08/23/32bfba3c-87ba-11e7-9ce7-9e175d8953fa_story.html?utm_term=.a85f9b0aff0c*; Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*; Tom Schoenberg, Greg Farrell, and Joe Sobczyk, "U.S. Expands North Korea Sanctions, Seeks to Seize Millions," Bloomberg, August 22, 2017. *https://www.bloomberg.com/news/articles/2017-08-22/treasury-sanctions-russian-chinese-companies-over-north-korea*; Jessica Meyers, "China Denounces U.S. Sanctions on North Korea Trade," *Los Angeles Times*, August 23, 2017. *http://www.latimes.com/politics/washington/la-na-essential-washington-updates-china-denounces-u-s-sanctions-on-north-1503495214-htmlstory.html*.

[28] U.S. Department of Treasury Press Center, *Treasury Targets Chinese and Russian Entities and Individuals Supporting the North Korean Regime*, August 22, 2017. *https://www.treasury.gov/press-center/press-releases/Pages/sm0148.aspx*; Simon Denyer, "China Demands U.S. Immediately Withdraw N. Korea Sanctions, Warns They Will Damage Ties," *Washington Post*, August 23, 2017. *https://www.washingtonpost.com/world/china-bristles-at-us-imposed-sanctions-on-north-korea-trade/2017/08/23/32bfba3c-87ba-11e7-9ce7-9e175d8953fa_story.html?utm_term=.a85f9b0aff0c*; Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*; Tom Schoenberg, Greg Farrell, and Joe Sobczyk, "U.S. Expands North Korea Sanctions, Seeks to Seize Millions," Bloomberg, August 22, 2017. *https://www.bloomberg.com/news/articles/2017-08-22/treasury-sanctions-russian-chinese-companies-over-north-korea*; Jessica Meyers, "China Denounces U.S. Sanctions on North Korea Trade," *Los Angeles Times*, August 23, 2017. *http://www.latimes.com/politics/washington/la-na-essential-washington-updates-china-denounces-u-s-sanctions-on-north-1503495214-htmlstory.html*.

[29] Eleanor Albert, "The China–North Korea Relationship," *Council on Foreign Relations*, July 5, 2017. *https://www.cfr.org/backgrounder/china-north-korea-relationship*; Jane Perlez and Yufan Huang, "China Says its Trade with North Korea Has Increased," *New York Times*, April 13, 2017. *https://www.nytimes.com/2017/04/13/world/asia/china-north-korea-trade-coal-nuclear.html?_r=0*.

[30] Eleanor Albert, "The China–North Korea Relationship," *Council on Foreign Relations*, July 5, 2017. *https://www.cfr.org/backgrounder/china-north-korea-relationship*; Jane Perlez and Yufan Huang, "China Says its Trade with North Korea Has Increased," *New York Times*, April 13, 2017. *https://www.nytimes.com/2017/04/13/world/asia/china-north-korea-trade-coal-nuclear.html?_r=0*.

[31] Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*; Jessica Meyers, "China Denounces U.S. Sanctions on North Korea Trade," *Los Angeles Times*, August 23, 2017. *http://www.latimes.com/politics/washington/la-na-essential-washington-updates-china-denounces-u-s-sanctions-on-north-1503495214-htmlstory.html*.

[32] Simon Denyer, "China Demands U.S. Immediately Withdraw N. Korea Sanctions, Warns They Will Damage Ties," *Washington Post*, August 23, 2017. *https://www.washingtonpost.com/world/china-bristles-at-us-imposed-sanctions-on-north-korea-trade/2017/08/23/32bfba3c-87ba-11e7-9ce7-9e175d8953fa_story.html?utm_term=.a85f9b0aff0c*; Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*.

[33] Kim Hjelmgaard and Oren Dorell, "China Demands U.S. 'Correct its Mistake' over North Korea Sanctions," *USA Today*, August 23, 2017. *https://www.usatoday.com/story/news/world/2017/08/23/china-demands-u-s-correct-its-mistake-over-north-korea-sanctions/592783001/*; *VOA News*, "China, Russia Object to New US Sanctions Linked to North Korea," August 23, 2017. *https://www.voanews.com/a/china-and-russia-object-to-new-us-sanctions-linked-to-north-korea/3997706.html*.

[34] Shinhye Kang and Joe Sobczyk, "Trump Says Talk with North Korea Done as Mattis Urges Diplomacy," Bloomberg, August 29, 2017. *https://www.bloomberg.com/news/articles/2017-08-29/kim-says-latest-missile-test-was-prelude-to-containing-guam*; Brad Lendon and Joshua Berlinger, "Next Target Guam, North Korea Says," CNN, August 30, 2017. *http://www.cnn.com/2017/08/29/asia/north-korea-missile-launch-guam-threat/index.html*.

[35] Johnathan Cheng, "U.S. Dispatches Stealth Jets, Bombers in Warning to North Korea," *Wall Street Journal*, August 31, 2017. *https://www.wsj.com/articles/u-s-bombers-in-show-of-force-after-north-koreas-missile-over-japan-1504176067*.

[36] David E. Sanger and Choe Sang-Hun, "North Korean Nuclear Test Draws U.S. Warning of Massive Military Response," *New York Times*, September 2, 2017. *https://www.nytimes.com/2017/09/03/world/asia/north-korea-tremor-possible-6th-nuclear-test.html*.

[37] David E. Sanger and Choe Sang-Hun, "North Korean Nuclear Test Draws U.S. Warning of Massive Military Response," *New York Times*, September 2, 2017. *https://www.nytimes.com/2017/09/03/world/asia/north-korea-tremor-possible-6th-nuclear-test.html*.

[38] Choe Sang-hun, "Allies for 67 Years, U.S. and South Korea Split over North Korea," *New York Times*, September 4, 2017.
[39] Yojana Sharma, "China Steps up Efforts to Lure Academic Talent from Overseas," *Chronicle of Higher Education*, March 29, 2017. *http://www.chronicle.com/article/China-Steps-Up-Efforts-to-Lure/239636*.
[40] American Chamber of Commerce in the People's Republic of China, "2017 China Business Climate Survey Report." *http://www.amchamchina.org/uploads/media/default/0001/06/990dc2c671441d882586cc05ded6dde7e261fa0e.pdf*.
[41] Reuters, "China Pledges Wider Opening to Foreign Investors, More IP Protection," August 16, 2017. *http://www.reuters.com/article/us-china-economy-foreign-investment-idUSKBN15110W*.
[42] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.
[43] Ashwin Kaja, "China's New Foreign Investment Catalogue Reduces Restrictions, Furthers Nationwide Negative List Approach," *Covington & Burling LLP*, July 31, 2017. *https://www.globalpolicywatch.com/2017/07/chinas-new-foreign-investment-catalogue-reduces-restrictions-furthers-nationwide-negative-list-approach/*.
[44] Reuters, "China Unveils New Plan to Further Open Economy to Foreign Investment," January 17, 2017. *http://www.reuters.com/article/us-china-economy-foreign-investment-idUSKBN15110W*.
[45] U.S. Department of Commerce, *JOINT RELEASE: Initial Results of the 100-Day Action Plan of the U.S. - China Comprehensive Economic Dialogue*, May 11, 2017. *https://www.commerce.gov/news/press-releases/2017/05/joint-release-initial-results-100-day-action-plan-us-china-comprehensive*.
[46] Doug Palmer, "China Drags its Feet on Opening Market to Electronic Payments Like Visa and MasterCard," Politico, July 12, 2017.
[47] Alexander Chipman Koty, "China's 2017 Foreign Investment Catalogue Opens Access to New Industries," *China Briefing*, July 11, 2017. *http://www.china-briefing.com/news/2017/07/11/china-releases-2017-foreign-investment-catalogue-opening-access-new-industries.html*.
[48] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.
[49] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.
[50] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.
[51] China's State Council, *Notice of the State Council on Several Measures to Promote the Growth of Foreign Investment*, August 16, 2017.
[52] Xiang Li, "China's Specialized IP Courts," *Kluwer Patent Blog*, April 10, 2017. *http://patentblog.kluweriplaw.com/2017/04/10/chinas-specialized-ip-courts/?doing_wp_cron=1504202988.1219561100006103515625*.
[53] American Chamber of Commerce in the People's Republic of China, "2017 China Business Climate Survey Report." *http://www.amchamchina.org/uploads/media/default/0001/06/990dc2c671441d882586cc05ded6dde7e261fa0e.pdf*.
[54] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.
[55] Reuters, "China Pledges Wider Opening to Foreign Investors, More IP Protection," August 16, 2017. *http://www.reuters.com/article/us-china-economy-foreign-investment-idUSKBN15110W*.
[56] China's State Council, *China Builds Better Business Environment with Solid Measures*, August 16, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/16/content_281475794216726.htm*.
[57] China's State Council, *State Council Issues Guideline on Overseas Investment*, August 18, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/18/content_281475798846134.htm*.
[58] China's State Council, *State Council Issues Guideline on Overseas Investment*, August 18, 2017. *http://english.gov.cn/policies/latest_releases/2017/08/18/content_281475798846134.htm*.
[59] Lester Ross and Kenneth Zhou, "New Policies on China's Overseas Investments," *Wilmer Hale*, September 1, 2017. *https://wilmerhalecommunications.com/26/1846/september-2017/new-policies-on-china-s-overseas-investments.asp?sid=88c751be-25e1-46af-ad96-b4df075232e6*.
[60] Lester Ross and Kenneth Zhou, "New Policies on China's Overseas Investments," *Wilmer Hale*, September 1, 2017. *https://wilmerhalecommunications.com/26/1846/september-2017/new-policies-on-china-s-overseas-investments.asp?sid=88c751be-25e1-46af-ad96-b4df075232e6*.
[61] Lester Ross and Kenneth Zhou, "New Policies on China's Overseas Investments," *Wilmer Hale*, September 1, 2017. *https://wilmerhalecommunications.com/26/1846/september-2017/new-policies-on-china-s-overseas-investments.asp?sid=88c751be-25e1-46af-ad96-b4df075232e6*.
[62] Lester Ross and Kenneth Zhou, "New Policies on China's Overseas Investments," *Wilmer Hale*, September 1, 2017. *https://wilmerhalecommunications.com/26/1846/september-2017/new-policies-on-china-s-overseas-investments.asp?sid=88c751be-25e1-46af-ad96-b4df075232e6*.
[63] Lester Ross and Kenneth Zhou, "New Policies on China's Overseas Investments," *Wilmer Hale*, September 1, 2017. *https://wilmerhalecommunications.com/26/1846/september-2017/new-policies-on-china-s-overseas-investments.asp?sid=88c751be-25e1-46af-ad96-b4df075232e6*.
[64] Keith Bradsher, "After $225 Billion in Deals Last Year, China Reins in Overseas Investment," *New York Times*, March 12, 2017. *https://www.nytimes.com/2017/03/12/business/dealbook/china-deals-capital-controls-hollywood.html?_r=1*.
[65] Keith Bradsher, "After $225 Billion in Deals Last Year, China Reins in Overseas Investment," *New York Times*, March 12, 2017. *https://www.nytimes.com/2017/03/12/business/dealbook/china-deals-capital-controls-hollywood.html?_r=1*.
[66] Don Weinland, "China Capital Crackdown Threatens Wave of Overseas Buyouts," *Financial Times*, February 27, 2017. *https://www.ft.com/content/091677dc-f8ec-11e6-bd4e-68d53499ed71*; Tom Mitchell et al., "China Clamps down on Banks Moving Currency Overseas," *Financial Times*, January 27, 2017. *https://www.ft.com/content/c9f7d320-dee7-11e6-9d7c-be108f1c1dce*.

[67] Xinhua, "China Tightens Regulation over Investment by State Firms," January 18, 2017.
[68] Tom Mitchell, "China's State Council Puts Seal on Capital Controls," *Financial Times*, August 18, 2017. *https://www.ft.com/content/3a638d1c-8405-11e7-a4ce-15b2513cb3ff*.
[69] Tom Mitchell, "China's State Council Puts Seal on Capital Controls," *Financial Times*, August 18, 2017. *https://www.ft.com/content/3a638d1c-8405-11e7-a4ce-15b2513cb3ff*; China's National Bureau of Statistics via CEIC database.
[70] Rhodium Group, "China Investment Monitor." *http://rhg.com/interactive/china-investment-monitor*.
[71] Don Weinland, "Chinese Capital Constraints Send Shock through Global M&A," *Financial Times*, March 30, 2017. *https://www.ft.com/content/a4130914-1465-11e7-b0c1-37e417ee6c76*.
[72] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 1, 31. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[73] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 1. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[74] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 8. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[75] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 9. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[76] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 10. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[77] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation: Selected Issues," August 2017, 50. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-Selected-Issues-45171*.
[78] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 10. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[79] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 15. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[80] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 16. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*; Tom Mitchell, "China's Communist Party Seeks Company Control before Reform," *Financial Times*, August 14, 2017. *https://www.ft.com/content/31407684-8101-11e7-a4ce-15b2513cb3ff*.
[81] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 16. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[82] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 16. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[83] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation: Selected Issues," August 2017, 4. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-Selected-Issues-45171*; International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 13. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[84] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 14. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[85] International Monetary Fund, "The People's Republic of China: 2017 Article IV Consultation," August 2017, 14. *https://www.imf.org/en/Publications/CR/Issues/2017/08/15/People-s-Republic-of-China-2017-Article-IV-Consultation-Press-Release-Staff-Report-and-45170*.
[86] U.S. Energy Information Administration, *U.S. Exports to China of Crude Oil and Petroleum Products*, May 2017. *http://tonto.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTEXCH1&f=M*.
[87] U.S. Energy Information Administration, *U.S. Exports to China of Crude Oil and Petroleum Products*, May 2017. *http://tonto.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTEXCH1&f=M*.
[88] U.S. Energy Information Administration, *U.S. Exports to China of Crude oil and petroleum Products*, May 2017. *http://tonto.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=MTTEXCH1&f=M*.
[89] Catherine Traywick and Sheela Tobben, "China Surpasses Canada as Top Buyer of U.S. Crude," Bloomberg Markets, April 4, 2017. *https://www.bloomberg.com/news/articles/2017-04-04/china-surpasses-canada-as-top-u-s-crude-buyer-amid-record-sales*.
[90] General Administration of Customs via CEIC database.
[91] Dominique Patton et al., "China's Crude Oil Output Will Fall 7 Percent by 2020 – Government," Reuters, January 17, 2017. *http://www.reuters.com/article/us-china-energy-idUSKBN15118K*; Oil & Gas 360, "Chinese Oil Production Dives by 8% in 2017," March 17, 2017. *https://www.oilandgas360.com/chinese-oil-production-dives-8-2017/*.

[92] China's State Council, *Natural Gas Supplies to Exceed 360 Billion Cubic Meters by 2020*, January 20, 2017. *http://english.gov.cn/state_council/ministries/2017/01/20/content_281475546580444.htm*.
[93] General Administration of Customs via CEIC database.
[94] General Administration of Customs via CEIC database.
[95] Export.gov, "China - Oil and Gas," July 25, 2017. *https://www.export.gov/article?id=China-Oil-and-Gas*.
[96] David Sheppard, Anjli Raval, and Xinning Liu, "Traders Nervously Eye China's Strategic Oil Imports," *Financial Times*, August 18, 2017. *https://www.ft.com/content/608fb1ce-83fa-11e7-94e2-c5b903247afd*.
[97] Bloomberg Markets, "Satellite Data Show China May Have Stored More Crude Than Estimated," September 29, 2016. *https://www.bloomberg.com/news/articles/2016-09-29/satellite-data-show-china-oil-reserves-may-top-official-estimate*.
[98] Julian Lee, "The New Thing in Chinese Oil? America," Bloomberg Gladfly, August 27, 2017. *https://www.bloomberg.com/gadfly/articles/2017-08-27/who-s-china-s-new-best-friend-in-the-oil-market-america*.
[99] Amy Harder and Lynn Cook, "Congressional Leaders Agree to Lift 40-Year Ban on Oil Exports," *Wall Street Journal*, December 16, 2015. *https://www.wsj.com/articles/congressional-leaders-agree-to-lift-40-year-ban-on-oil-exports-1450242995*.
[100] Catherine Traywick and Sheela Tobben, "China Surpasses Canada as Top Buyer of U.S. Crude," Bloomberg Markets, April 4, 2017. *https://www.bloomberg.com/news/articles/2017-04-04/china-surpasses-canada-as-top-u-s-crude-buyer-amid-record-sales*; Julian Lee, "The New Thing in Chinese Oil? America," Bloomberg Gladfly, August 27, 2017. *https://www.bloomberg.com/gadfly/articles/2017-08-27/who-s-china-s-new-best-friend-in-the-oil-market-america*.
[101] Lynn Cook and Benoit Faucon, "How American Shale Drillers Flipped OPEC's Script," *Wall Street Journal*, May 24, 2017. *https://www.wsj.com/articles/how-american-shale-drillers-flipped-opecs-script-1495618203*.
[102] Brian Spegele, "U.S. Oil Producers Find a Surprise New Market: China," *Wall Street Journal*, July 6, 2017. *https://www.wsj.com/articles/u-s-oil-producers-open-taps-for-chinese-market-1499344246*.
[103] Steve Voss and Samuel Dodge, "OPEC Quietly Opened the Taps in June," Bloomberg, July 17, 2017. *https://www.bloomberg.com/graphics/2017-opec-production-targets/*.
[104] Steve Voss and Samuel Dodge, "OPEC Quietly Opened the Taps in June," Bloomberg, July 17, 2017. *https://www.bloomberg.com/graphics/2017-opec-production-targets/*.
[105] Lynn Cook and Benoit Faucon, "How American Shale Drillers Flipped OPEC's Script," *Wall Street Journal*, May 24, 2017. *https://www.wsj.com/articles/how-american-shale-drillers-flipped-opecs-script-1495618203*.
[106] Lynn Cook and Benoit Faucon, "How American Shale Drillers Flipped OPEC's Script," *Wall Street Journal*, May 24, 2017. *https://www.wsj.com/articles/how-american-shale-drillers-flipped-opecs-script-1495618203*.
[107] Lynn Cook and Benoit Faucon, "How American Shale Drillers Flipped OPEC's Script," *Wall Street Journal*, May 24, 2017. *https://www.wsj.com/articles/how-american-shale-drillers-flipped-opecs-script-1495618203*.
[108] Brian Spegele, "U.S. Oil Producers Find a Surprise New Market: China," *Wall Street Journal*, July 6, 2017. *https://www.wsj.com/articles/u-s-oil-producers-open-taps-for-chinese-market-1499344246*.
[109] Brian Spegele, "U.S. Oil Producers Find a Surprise New Market: China," *Wall Street Journal*, July 6, 2017. *https://www.wsj.com/articles/u-s-oil-producers-open-taps-for-chinese-market-1499344246*.
[110] Brian Spegele, "U.S. Oil Producers Find a Surprise New Market: China," *Wall Street Journal*, July 6, 2017. *https://www.wsj.com/articles/u-s-oil-producers-open-taps-for-chinese-market-1499344246*.
[111] Zheng Xin, "China Escalates Imports of Crude from United States," *China Daily*, July 20, 2017. *http://www.chinadaily.com.cn/business/2017-07/20/content_30179723.htm*.