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THE MIDDLE KINGDOM RETURNS TO THE SEA, WHILE AMERICA TURNS ITS BACK

How China Came to Dominate the Global Maritime Industry, and the Implications for the World

Christopher J. McMahon

The condition of the American Merchant Marine is such as to call for immediate remedial action by the Congress. It is discreditable to us as a Nation that our merchant marine should be utterly insignificant in comparison to that of other nations we overtop in other forms of business. We should no longer submit to conditions under which only a trifling portion of our great commerce is carried in our own ships. To remedy this state of things would not merely serve to build up our shipping interests, but it would also result in benefit to all who are interested in the permanent establishment of a wide market for American products, and would provide an auxiliary force for the Navy.

PRESIDENT THEODORE ROOSEVELT,
ANNUAL MESSAGE TO CONGRESS, 1901

Command of the marine transportation system has long acted as the stage on which great powers compete. . . . The infrastructure facilitating the transport of maritime commerce—ocean-going vessels, deep-water ports, high-speed railways, and fiber optic cables—descend from technologies Western powers once leveraged in the 19th and 20th centuries to expand their access to foreign markets. Today, the MSR [China's Maritime Silk Road] mimics these strategies, for example, by building railways in Africa or laying transoceanic data cables. In some locations, new MSR projects are literally replacing colonial projects. The MSR is a strategic economic policy, intended to promote the Chinese workforce, build bilateral ties, foster dependence, and ensure near-exclusive access to foreign ports for Chinese controlled or affiliated vessels. . . . Through MSR projects, China can advance both economic and non-economic objectives simultaneously.

REPRESENTATIVE SEAN PATRICK MALONEY (D-NY), CHAIR,
HOUSE SUBCOMMITTEE ON COAST GUARD AND
MARINE TRANSPORTATION, 17 OCTOBER 2019

Since the founding of the United States during the Revolutionary War, nearly every president has recognized and called for congressional support of a strong U.S. maritime industry.¹ As the United States supposedly is a maritime nation with a massive international trading economy, it seems obvious that control of, or at least strong influence over, America's seagoing supply chains is important.² Through the first half of the nineteenth century, the U.S. Merchant Marine was one of the largest and most efficient of its kind in the world—partly because of public and political support.³ In those decades U.S.-flag clipper ships dominated many trades, including—ironically—the China trade. But the second half of that century saw the industry go into steep decline—in some measure because political support had evaporated. For economic and strategic reasons during the first half of the twentieth century—specifically, immediately prior to World Wars I and II—Congress intervened, taking critical steps to support the industry. But today that past support of the industry has disappeared once again, and the U.S. maritime industry engaged in international trade is in a perilous state of affairs. This has occurred as the People's Republic of China (PRC) has become, by far, the leading commercial maritime power in the world.

The lack of a vibrant U.S. maritime industry engaged in worldwide trade places the strategic and economic interests of the United States and its allies in grave jeopardy. This is particularly so given that the PRC now dominates most sectors of the world's maritime industry, and consolidation in all sectors is occurring at a rapid rate that benefits the PRC. The influence and the effectiveness of the PRC's political and governmental intervention and funding in all sectors of China's maritime industry are causing numerous other companies in the global industry simply to cease operations or suffer absorption by Chinese companies. There is a strong prospect that within little more than a decade, or even sooner, China virtually will control the world's seagoing supply chain. The consequences of this happening for the United States and the world as a whole are staggering. As a nation dependent on maritime transportation for its economy and for the movement of its military forces, the United States must take decisive and immediate steps to promote the reestablishment of U.S.-flag shipping and further enable all sectors of the U.S. maritime industry to compete in a significant way in the global industry.

ONCE UPON A TIME

It was the winter of 1979–80. A buzz was going around the offices of the New Orleans-based Lykes Brothers Steamship Company (also known as Lykes Lines) and through its fleet of forty-five vessels. Word had it that SS *Letitia Lykes* was loading full and down on the West Coast of the United States with eighteen thousand tons of cargo bound for Shanghai, China. *Letitia* would be the first U.S.-flag

ship to call on a mainland Chinese port since World War II. This event was the result of the ongoing rapprochement between the PRC and the United States that followed President Richard M. Nixon's historic visit to China in 1972 and follow-on efforts by Presidents Gerald R. Ford and Jimmy Carter. The opening of this new market indeed was cause for celebration.⁴

At the time, Lykes was one of dozens of U.S.-flag ocean-shipping companies. With its forty-five vessels, Lykes was one of the larger U.S. companies, but not the largest; that honor fell to SeaLand Services Corporation, which in 1979 was by far the largest container-shipping company in the world. But in 1980, even with more than 860 merchant ships, the U.S.-flag industry operated only about 3.8 percent of the world's merchant vessels, which then totaled about 22,872 ships.⁵ That percentage was down from a 1946 high, when the United States operated some 70 percent of the world's commercial shipping.⁶ By 1960, this number had fallen to 16.9 percent of the world's fleet. Even so, in 1980 U.S.-flag shipping still was significant. Plus, the U.S. maritime industry had made massive technological innovations that revolutionized the industry, such as the introduction of container shipping and lighter-aboard-ship (or LASH) vessels.

SS *Letitia Lykes*, like all Lykes ships, had been built in a U.S. shipyard, supported by the Maritime Administration (MARAD) through the Construction Differential Subsidy (CDS) program. U.S.-flag shipping companies were owned and operated by American citizens without any foreign corporate interests involved. Profits stayed in the United States. U.S. shipping companies, particularly SeaLand Services, owned or leased and operated dozens of container terminals in U.S. ports and in ports throughout the world. While the United States at the time was in the process of implementing a treaty to turn over operation of the Panama Canal to Panama, the United States still exercised significant influence in the canal's affairs.⁷

Although in these years the United States did not possess the largest merchant marine in the world, the size and influence of its industry still were considerable in global maritime affairs, and with its large navy the United States rightfully could be called a maritime nation, according to the criteria of naval historian Captain Alfred Thayer Mahan, USN, as laid out in his influential book *The Influence of Sea Power upon History, 1660-1783*. Mahan believed that history demonstrated that a truly maritime nation required a sizable merchant marine in addition to a powerful navy.⁸

TWENTIETH-CENTURY SUPPORT FOR THE U.S.-FLAG SHIPPING INDUSTRY

In the decades leading to World War I, American agricultural and industrial exports increased dramatically and America became the leading economic

superpower, even as the U.S. Merchant Marine continued to decline. Americans and American-owned businesses were confident that inexpensive foreign-flag shipping would remain bountiful and readily available as needed to provide the seagoing logistics the nation required. This proved to be a false assumption. With the outbreak of war in 1914, the American economy, dependent on international trade, suffered from a lack of availability of commercial ships. The European nations that had provided the commercial sealift for the American economy withdrew their vessels for political reasons and for wartime purposes. This caused widespread disruption in trade; manufactured products piled up on American docks, in railcars, and in warehouses, and agricultural goods spoiled because they could not be brought to overseas markets. The American economy suffered greatly because of the lack of available commercial shipping.⁹

The extent of the damage to the American economy caused by the shortage of U.S.-flag shipping in 1914 was so serious that Congress finally decided to act, but this took time, and the insufficiency of commercial shipping continued to imperil the economy. Following numerous and lengthy hearings, Congress passed the Shipping Act of 1916, which created the United States Shipping Board. The board was designed specifically to promote and assist the U.S. Merchant Marine. By the time the board was fully established, however, it was apparent the United States would enter the war soon. This placed the board on a wartime footing. In October 1917, the board requisitioned the entire U.S. Merchant Marine.¹⁰

In 1917, the Shipping Board initiated a huge shipbuilding program through the creation of the Emergency Fleet Corporation. Eventually, the board contracted for more than 1,700 merchant vessels. Despite this unprecedented effort, only 107 ships were delivered before the armistice was signed in November 1918. However, the remaining vessels were completed by 1922, and it was hoped that U.S.-flag companies would purchase them, and some did. Following World War I, the United States ranked number one in the world, at least in numbers of potentially available merchant ships. But the country never followed through on this advantage.¹¹ By the 1930s, the U.S. Merchant Marine again was in a perilous condition owing to political neglect. And ominously, the challenges of World War II were on the horizon.

Other legislation that attempted to support U.S.-flag shipping included the so-called Jones Act. The Merchant Marine Act of 1920 (Pub. L. No. 66-261) was sponsored by Senator Wesley L. Jones from Washington State. A major purpose of the act was to support the rights of American seafarers by solidifying laws passed during the late nineteenth and early twentieth centuries. For example, the act gave seafarers the right to sue their employer for workplace (shipboard) injuries. A second provision of the act would establish procedures for transferring the U.S. government-owned merchant vessels built in response to World War I to

private ownership. The lessons learned from World War I included recognition that the U.S. Merchant Marine was critical to national security. The preamble to the Jones Act included the following summary: “It is hereby declared the policy of the United States to do whatever may be necessary to develop and encourage the maintenance of a merchant marine . . . sufficient to carry the greater portion of its commerce and serve as a naval or military auxiliary in time of war or national emergency, ultimately to be owned and operated by citizens of the United States.”¹²

As one way to support and maintain the U.S. Merchant Marine, the Jones Act also renewed cabotage legislation that Congress had established and maintained during the late eighteenth century and throughout the nineteenth. The policy required trade between U.S. ports to be restricted to U.S.-built, U.S.-owned, U.S.-flag, and U.S.-crewed merchant ships. (The very first piece of legislation that Congress passed under the Constitution, in April 1789, established a tariff on imported goods to protect U.S.-flag shipping. This was followed by the Navigation Act of 1817, which expressly excluded foreign-flag vessels from trading between U.S. ports.)¹³ Cabotage legislation, including the Jones Act, always has ensured that there are U.S.-flag vessels to serve coastal, inland, and island trades, and it has continued to provide jobs for mariners, who then have been available to serve on strategic sealift vessels in times of national emergency. But this legislation was suspended prior to World War I because of the lack of U.S.-flag ships.

The key legislation that clearly defined support for the U.S. Merchant Marine in the twentieth century was the Merchant Marine Act of 1936. From the time the law was enacted through the next forty-five years, the U.S. Merchant Marine enjoyed generally strong support from Congress and presidential administrations. The act established the U.S. Maritime Commission (later renamed the Maritime Administration). It established the CDS program, which provided funds to support the construction of ships in U.S. shipyards. The act also established operating differential subsidies (ODSs), which provided funds to enable and encourage shipping companies to operate their ships under the U.S. flag. Finally, the act established the U.S. Merchant Marine Academy, an institution dedicated to educating and training merchant marine officers. It is not an exaggeration to state that the Merchant Marine Act of 1936 played a pivotal role in preparing the United States for World War II and, following the attack on Pearl Harbor, the quick construction of the largest and most capable merchant marine the world had ever seen, despite huge losses of ships and mariners during the early years of the war.¹⁴

In an effort to support U.S.-flag shipping further, Congress passed two companion bills in 1954, the Agricultural Trade Development and Assistance Act (Pub. L. No. 83-480) and the Cargo Preference Act (Pub. L. No. 83-664), which required a percentage of government-impelled cargo, such as food aid, to be carried

on U.S.-flag ships.¹⁵ These requirements, overseen by MARAD, have guaranteed cargoes for U.S.-flag ships and provided financial support for the industry.

With the support of Republican president Nixon, a Democratic Congress passed the Merchant Marine Act of 1970. This legislation increased the subsidies provided by MARAD's CDS program, which substantially increased the construction rate of new merchant ships in U.S. shipyards, yielding dozens of ships. As a result, relatively large numbers of new and technically innovative ships joined the U.S.-flag fleet in the 1970s, and the shipbuilding industry in these years was particularly healthy, as was the U.S. maritime industry in general.¹⁶ Many of these same shipyards built warships for the Navy, and the large numbers of both commercial and Navy contracts enabled economies of scale that allowed shipyards to build vessels at lower per-ship costs.¹⁷

THE GLOBAL MARITIME WORLD CHANGES—THE U.S. MARITIME INDUSTRY TODAY

When SS *Letitia Lykes* departed Shanghai on the transit back to the United States from its historic voyage in the spring of 1980, its cargo holds were nearly empty. In those years, the Chinese had little to sell to a U.S. market. With only twenty-six PRC-flag vessels in international trade, the Chinese shipping industry was equally insignificant.¹⁸ While Chinese shipyards built some small coastal trading vessels and fishing boats, they produced no large vessels. There were few or no Chinese companies operating in other countries, and certainly no Chinese companies operating ports and terminals outside China.

What a difference forty years makes! The U.S. maritime industry has retreated on all fronts, whereas the Chinese industry has exploded in size to become, by far, the largest in the world, in nearly every category. This has been the result of public, corporate, and political apathy in the United States and quite the opposite in China; in the latter, government and industry have partnered for decades to implement strategic plans to grow all sectors of the industry. In the United States, it also is the result of a public and political lack of understanding of the role the maritime industry plays in the strategic and economic health of the nation. The U.S. maritime industry engaged in worldwide trade had been in decline since World War II; however, those American companies still operating ships in international trade into the 1980s entered a *steep* decline at that time, eventually going bankrupt and ceasing operations.

When the Reagan administration came into office in 1981 it almost immediately eliminated the CDS shipbuilding program provided by the Merchant Marine Acts of 1936 and 1970. Over the next several years, this action, in turn, forced the closure of numerous commercial shipbuilding companies across America. In 1975, U.S. shipyards produced seventy deep-sea commercial ships.¹⁹

The Reagan administration's abolition of the CDS program crippled the industry. Today no subsidies are provided to build vessels in U.S. shipyards. As a result, only a few shipyards remain in the United States that are capable of building deep-sea commercial ships, and the future financial health of these remaining yards is in question. The only commercial ships built after 1980 have been for Jones Act trades, which require ships built in U.S. shipyards.

In 2016, the number of commercial ships constructed in U.S. yards averaged only five vessels per year during the previous five years, in a context of a world-wide production average of 1,408 vessels per year.²⁰ Ironically, whereas to some the elimination of shipbuilding subsidies had the apparent effect of reducing costs to the taxpayer, the actual impact may be the opposite. Navy vessels and Jones Act vessels were and still are required to be built in U.S. shipyards, but with fewer shipyards building fewer vessels, economies of scale could not be realized, so the unit cost of each ship became far greater.²¹ Between 1987 and 1992, an average of fewer than two commercial seagoing vessels were built per year; as noted, between 2010 and 2016, the average was five.²² Equally serious has been the loss of shipbuilding infrastructure and shipbuilding jobs, with a concurrent loss of shipbuilding skills and expertise. These are capabilities that cannot be turned on with the flick of a switch.

Since 1980, the size of the U.S.-flag fleet in international trade likewise has declined dramatically. In the early years of the Reagan administration, actions were taken to eliminate the ODS that enabled many companies to conduct operations under the U.S. flag.²³ These subsidies were provided by contract, so these payments had to be phased out over time as contracts expired. As ODS contracts were not renewed, the majority of U.S.-flag companies ceased operations or simply went bankrupt. This created a crisis for the military, which requires a capable U.S. Merchant Marine to carry equipment and supplies in the event of a national emergency. To remedy this situation, the Department of Defense spent billions of dollars to purchase and convert dozens of older, foreign-owned, -built, and -operated vessels, which were placed in a Ready Reserve Force (RRF) maintained and operated by MARAD (since 1981 part of the U.S. Department of Transportation).²⁴ In addition—and with the urging of the Defense Department—Congress in 1996 established the Maritime Security Program (MSP), which MARAD manages. MSP essentially provides a subsidy for sixty U.S.-flag ships—notably similar to the original ODS program created by the Merchant Marine Act of 1936.²⁵ Currently, the MSP program is funded at five million dollars per ship, per year.²⁶ Considering the high cost of establishing and maintaining the RRF in combination with the MSP program, it is questionable whether the taxpayers benefited at all from the elimination of the ODS program; the reverse probably is true. In any case, the results have included the loss of nearly all U.S.

shipping companies, a great reduction in the number of U.S.-flag vessels, and the loss of thousands of skilled mariner jobs.

The MSP law requires that U.S.-flag vessels be owned and operated by a U.S. company under the management of U.S. citizens, and the sixty MSP ships indeed are “owned and operated” by U.S. companies registered in the United States. However, nearly every one of these sixty ships is owned by a U.S. company that is merely a subsidiary of a foreign company—and the parent companies and their countries may have interests different from those of the United States. According to the United Nations Conference on Trade and Development (UNCTAD), in 2018 there were 94,169 commercial deep-sea vessels in the world, of which 50,732 were merchant ships.²⁷ Today, including the sixty MSP vessels, there are only about eighty U.S.-flag vessels operating in international trade.²⁸

As if political reversal of support for the U.S. Merchant Marine were not enough to decimate the U.S.-flag industry, attacks on the cabotage provisions of the Jones Act—periodically vigorous—have reached a new height in the last two years. Spearheaded by the Cato Institute and other special-interest groups, efforts have been made in the form of dozens of articles, conferences, and even recent proposed legislation on Capitol Hill to overturn the law.²⁹ While presenting no substantive and verified cost data to show that the Jones Act causes significant financial burdens to U.S. consumers in states, commonwealths, and territories served by the act compared with using foreign-flag carriers, Jones Act detractors fail to understand the law’s strategic importance. First, elimination of the Jones Act poses the possibility of causing Jones Act companies to cease operating under the U.S. flag, thus further reducing the number of available U.S. merchant ships. (This would be particularly true if foreign-flag companies, subsidized by their governments, were allowed to enter Jones Act—that is, domestic American—trades.) Second, with the loss of the jobs that Jones Act companies now provide, the pool of qualified U.S. merchant mariners virtually would disappear. This would make it impossible to crew the ships of the RRF and other strategic sealift vessels. This in turn would cripple military logistics, which is dependent on these ships in a national emergency. From a security standpoint, overturning the Jones Act has the potential to enable foreign companies (particularly those subsidized by their governments) effectively to assume control of inland transportation in the United States, with the result that thousands of foreign nationals would be operating vessels inside the United States—a potential security nightmare. Finally, under similar laws, U.S. airlines are afforded the same protections the U.S. maritime industry enjoys under the Jones Act. Some airline industry professionals believe that if the Jones Act were repealed these airline protections might be eliminated as well, possibly causing the demise of the U.S. domestic airline industry, similarly to what happened to the maritime industry.³⁰

Regarding port ownership and operation, whereas U.S. companies such as SeaLand Services once operated containership ports around the world, that company, like many U.S.-flag shipping companies, ceased to operate when it was purchased by a foreign-owned company. The ports and terminals once owned by SeaLand now are owned or operated by foreign port operators. The only U.S. port operator with terminal operations outside the United States is SSA Marine, which operates slightly more than a dozen terminals in ports around the world, in addition to its North American terminals. However, nearly half the interests in SSA are held by foreign nationals.³¹ In a reversal from the past, numerous foreign port operators and interests have purchased or leased control of many ports and terminals in the United States, which has caused national-security concerns.³² The United States no longer is involved in crucial maritime infrastructure in other countries. For example, there is little or no U.S. involvement in the Panama Canal; a Chinese company operates ports and terminals on both ends of the canal.³³

In short, if a *maritime power* is defined as a nation possessing a powerful navy, a sizable merchant marine, and capable maritime industries such as shipbuilding—a definition propounded by Alfred Thayer Mahan—then the United States clearly is no longer a maritime power. Instead, the United States probably is described better as a maritime-dependent nation, and likely is defined even better as a maritime nation that soon will be dependent on the Chinese maritime industry.

THE MIDDLE KINGDOM—HISTORICALLY A MARITIME POWER?

Understandably, given its huge terrestrial presence in Eurasia, for much of its history China primarily has been viewed as a continental nation. However, China also has had a strong maritime connection and has a rich maritime past. Geography encourages China to look toward the sea, particularly in the south, where mountains block easy access to the interior and there are thousands of populated islands off the coast. For centuries, southern seaboard provinces and islands have had large populations, but a dearth of available land has made it difficult to support those populations locally, making the sea critical for transportation, trade, fishing, and communication with other Chinese regions.³⁴

Today, China's land border is 13,743 miles long, and the country abuts fourteen other nations. Through its thousands of years of history, China has pursued countless wars of both aggression and defense against its many neighbors. Most, but by no means all, of these wars have been fought primarily with land forces. But China also has more than nine thousand miles of saltwater coastline, thousands of offshore islands, and several major rivers that connect to the sea, and the majority of the nation's population always has resided in coastal regions. Therefore China, to varying degrees, always has kept an eye on its maritime

interests. Chinese naval warfare began as early as the tenth century BCE and was common during the Warring States period (475–221 BCE). One story holds that in 471 BCE the great Chinese philosopher Confucius sought a leadership position with the Kingdom of Yue but was turned down because he lacked knowledge of naval operations.³⁵

Throughout most of its very long history, China has been a major manufacturing power, oftentimes the world leader. For thousands of years countries across the Eurasian landmass have sought Chinese goods. The long, overland passage called the Silk Road emerged as the major east–west trading route in the fourth century BCE.³⁶ Over the centuries that followed, the Silk Road continued to be a major trading route between China and the Middle East, and even to Europe; Chinese goods found their way to the Roman Empire. Eventually, the Silk Road expanded to include seagoing routes across the Indian Ocean to Middle Eastern and African ports. In his book *China as a Sea Power 1127–1368*, author Lo Jung-pang notes that “China tried to become a seapower (in centuries past); in particular, during the Qin and Han dynasties and later during the Sui and Tang dynasties.” He further notes that during the three centuries from the Southern Song to the early Ming period (twelfth century CE to fourteenth century CE), the maritime and overseas activities of the Chinese were so great that China was more of a sea power than a land power. It was by using its naval and maritime power, across many centuries, that China went abroad to trade, and even to colonize other Asian lands.³⁷

Chinese maritime power in centuries past reached its height during the first Ming period (1405–33), and especially during the reign of the third Ming emperor, Yongle (1402–24). He dispatched the renowned military commander Zheng He (1371–1433), known as the “Ming admiral.” From 1405 to 1433, Zheng completed seven extraordinary voyages, during which he sailed with as many as 250 ships and upward of thirty thousand men to destinations in southern Asia, the Middle East, and East Africa.³⁸

The main purposes of these military-oriented voyages were to expand Chinese influence throughout the Indian Ocean area and the Middle East, seek tribute for the Chinese court from local rulers, expand Chinese cultural influence, and improve trade. According to Naval War College professor Andrew Wilson, a key difference between European and Chinese efforts to seek trade during the early European age of exploration is that the Ming voyages did not seek trade so much as “the gravitational pull of the Chinese market (from these voyages) brought trade to [China]”—a phenomenon seemingly similar to the dynamic favoring China in the twenty-first century.³⁹

During the Ming period, China’s navy and merchant marine clearly were the largest and most powerful in the world, and their sphere of influence expanded

wherever Zheng's fleet landed. At the time, Chinese maritime technology far surpassed that of the Europeans. For example, the Chinese invented the compass and the rudder, which were huge innovations that enabled mariners to navigate and control vessels better on long voyages. Zheng's fleet included ships over four hundred feet in length. (By comparison, Columbus's *Santa María* was somewhere between sixty-two and eighty-five feet in length.) It is reasonable to assume that, had the Chinese wished to pursue ocean exploration and trade into the Atlantic and the Mediterranean and to Europe and even the Americas in the decades after Zheng's voyages, they likely would have become the dominant maritime power on earth, eclipsing European efforts.⁴⁰

For a complicated set of reasons, however, the Chinese abandoned their efforts to pursue great voyages beyond local Chinese waters after the death of Emperor Yongle. Following Admiral Zheng's seventh and final voyage, the new Ming emperor had the fleet destroyed, after which harsh punishments were decreed and imposed on those who even attempted to trade beyond Chinese waters.⁴¹ One law imposed the death penalty for building a ship with more than two masts, and a later law did the same for a ship with more than one mast.⁴² In essence, except for coastal trade and fishing, the Chinese, under the second Ming dynasty, largely abandoned the ocean.

This happened at the time when European countries were on the cusp of the age of exploration that was made possible by the development of new maritime technologies—many of which were based on lessons learned from Chinese nautical technological innovations such as the compass and the rudder. As the Europeans came to dominate global trade in the seventeenth through nineteenth centuries, the Chinese would pay dearly for their lack of maritime power. Their navy was largely ineffective and they no longer possessed a capable merchant marine by which to trade with other nations. For centuries this enabled the Europeans increasingly to impose countless demands on the Chinese and control Chinese seagoing trade, eventually resulting in “the century of shame” (extending from the mid-nineteenth century to the mid-twentieth century).⁴³ This fact has not been lost on the leadership of the PRC in recent times, and it helps to explain why the Chinese have taken such great steps to become not only *a* global maritime power but *the* dominant maritime power in the world today.

European control of China's seagoing trade continued into the twentieth century, following the collapse of the Qing dynasty in the early 1900s.⁴⁴ The world wars, Japanese occupation in the 1930s and '40s, and the civil war between the Nationalists and Communists decimated the Chinese economy. Following World War II, virtually all Chinese seagoing trade, both foreign and domestic, was carried in foreign-owned and -flagged ships. In 1950, the PRC merchant marine officially consisted of only seventy-seven ships, and the majority of these were

either unseaworthy or lying at the bottom of rivers and ports. Through the 1950s, China enjoyed a rather close relationship with the Soviet Union, and the Soviets encouraged Polish ships to carry Chinese seagoing trade; in fact, for many years the Polish merchant marine was China's primary provider of ocean transportation. During these years, there actually were no Chinese-flag ships engaged in international trade. As far as PRC ports and shipyards went, the picture was equally dismal in the 1950s. There were no shipyards capable of building ocean-going ships, and ports were hugely inefficient and few in number.⁴⁵ The Chinese did not own, lease, or operate any port terminals outside the mainland.

Despite the poor condition of the Chinese maritime industry in the early years of the PRC, the Communist Party's leadership fully grasped the importance of the industry and placed great emphasis on building a capable maritime industry in all sectors: ships, ports, shipyards, and mariners. It was clear to Mao Zedong's government that China needed a domestic maritime industry, particularly in coastal and river trades to compensate for the poor quality of roads and railroads.⁴⁶ With Soviet maritime expertise and the use of Soviet-built equipment, particularly engines, China began building domestic ships in the early 1960s. The initial building rate reached ten ships a year in 1960, but this fell to two following the deterioration of Sino-Soviet relations. The shipbuilding picture remained poor for many years because of the lack of Chinese technology and engineering capability and the inability to develop and build critical elements such as ship engines. In terms of ship ownership, in 1961 the state-owned China Ocean Shipping Company (COSCO) was formed under the Ministry of Communications. COSCO owned and controlled vessels under both Chinese and foreign flags. (In the 1960s the PRC began relying on foreign flags to operate many Chinese-owned ships. At the time, this included use of the British and Somali flags.)⁴⁷ The first voyage of a PRC-flag ship outside Asian waters was by *SS Heping*, which carried cargoes from China to the Republic of Guinea in West Africa in 1962. The Chinese merchant marine continued to grow through the 1960s, reaching more than three hundred ships by the early 1970s. Shipbuilding during this period remained a very limited industry, particularly since China did not have the expertise to develop and build nautical equipment and engines.⁴⁸

Through the 1970s and into the 1980s, the PRC continued to emphasize the development of its maritime industries, including shipping, shipyards, and ports. The number of PRC ships engaged in international trade doubled during this period. More ships were added to the Chinese flag-of-convenience fleets, particularly using the Somali and eventually the Panamanian flags. During these years, PRC ships began "cross trading," which involved carrying cargoes to and from ports other than China, and charging freight revenues in U.S. dollars, making the practice a good source of hard currency. In 1978, the number of PRC ships

in international trade surpassed that of the United States, and by 1982 China's merchant fleet ranked seventh in the world in size.⁴⁹

Of particular note during these years was the development of China's port and shipbuilding industries. Major efforts were undertaken to modernize Chinese shipyards, and with technical assistance from European, Japanese, and Singaporean shipbuilders the Chinese began building ships for domestic and export markets. Costs per ship were so low and demand was so high that Chinese yards had to suspend order books until shipbuilding capacity could be increased. During this period, ports also radically improved in capacity and capability. From 1959 to 1979, there was a 3,750 percent increase in cargo throughput in Chinese ports, but dock capacity had increased by only 30 percent. Given this serious situation, major efforts were undertaken to develop and build port infrastructure, including the introduction of container-handling equipment.⁵⁰ Through the next three decades, Chinese leaders continued to increase the capability and capacity of their maritime industries dramatically, in ship ownership, shipbuilding, port development, and a multitude of related industries. Today, China's maritime industry, in all sectors, is the largest in the world by far, and it still is growing rapidly.

THE CHINESE MARITIME INDUSTRY TODAY

The PRC government's decades-long support of the Chinese maritime industry has included substantial, even aggressive, financial subsidies, laws, and policies designed to enable all sectors of the industry to grow at phenomenal rates. Currently, with more than 5,500 merchant ships engaged in international trade, Chinese companies (including Hong Kong-based companies) own more ships than those of any other nation on earth.⁵¹ Chinese container-shipping companies combined carry more containers than the world's number one carrier, Maersk Line. This represents nearly 20 percent of all the containers carried by the top twenty carriers.⁵²

Chinese companies own or operate more ports and terminals around the world than those of any other country.⁵³ These Chinese companies include Hutchison Ports, COSCO Ports, China Merchants Ports, Shanghai International Port Group, and Qingdao Port International.⁵⁴ In fact, by 2015 "two-thirds of the world's top fifty container ports had some degree of Chinese investment in them, if not majority ownership and control, and this number is growing." These ports handle 67 percent of the world's shipping containers.⁵⁵ Chinese port companies in all ports around the world handle 39 percent of the total volume of containers—nearly double the share of the next largest port operator, which is headquartered in Singapore.⁵⁶ Of the top twenty ports in the world by cargo throughput (2016-17), fourteen are located in China.⁵⁷ Almost "under the radar," Chinese port companies acquired 49 percent ownership in France's CMA CGM

port operations, which has given Chinese companies operational control of Houston's Terminal Link port and South Florida Container Terminal in Miami.⁵⁸ COSCO has long-term lease/operations stakes in the ports of Los Angeles and Seattle as well.⁵⁹

By 2017, China was the number one shipbuilder in the world, as measured by the number of ships completed, new orders, and pending orders. Over 40 percent of the world's commercial ships now are built in China, and this percentage is growing as shipyards in other countries no longer can compete and are shuttered.⁶⁰ (Notably—and troubling from a USN perspective—during a mere eight-year period, from 2009 to 2017, the Chinese developed and built eighty-three warships for the Chinese navy, which now is the second-largest navy in the world, and within a few decades or less is expected to be the largest.)⁶¹ With 150 modern cutters and hundreds of other vessels, the China Coast Guard is the largest such service in the world.⁶² Numbered at more than two hundred thousand vessels, China's fishing fleet also is the largest in the world.⁶³

One of the secrets of Chinese successes in the incredible growth of the nation's maritime sector is the Chinese emphasis on maritime education—in nautical science, marine engineering, and maritime business. More than 115,000 students attend the several Chinese maritime universities and colleges.⁶⁴ Finally, China is a global leader in ship finance, providing funds for international shipping companies seeking to buy, build, or lease ships, particularly those from Chinese shipyards. In 2008, no Chinese bank was listed in the top ten of the world's shipbuilding-loan institutions; a decade later, the top two banks were Chinese—both state-owned institutions.⁶⁵ By 2025, it is projected that Chinese banks will provide 50 percent of all shipbuilding loans.⁶⁶ This means that, although China may not own or operate large numbers of the world's commercial ships, it will have influence, if not control, over a majority of the world's merchant fleet, because it will hold the mortgages on a major percentage of ships owned by companies in other countries.

China has made no attempt to hide its aspirations to influence, if not dominate, the world's maritime industry. In 2015, the Shanghai International Shipping Institute, a state-owned research institute, released a report, "China Shipping Development Outlook 2030." The report offers several conclusions. First, "China will remain the largest cargo trader in the world and will take a dominant role in global container shipping." Second, China will double its shipping engaged in worldwide trade and control at least 15 percent of that trade. To do this, China will become the number one shipowner in the world. (It already is.) Ship operators will evolve to become "global logistics providers" (much like other large containership operators, such as Maersk). The report notes that privately owned Chinese shipping companies will account for "over 70% of China owned ships." (However, this runs contrary to the current trend in China of state ownership,

which does not allow private-sector companies into the industry.) The report suggests that Chinese foreign-flag fleets will comprise upward of 90 percent of Chinese-owned ships. With regard to ports, the report notes that “throughput at Chinese ports will reach 505 million TEUs [twenty-foot-equivalent containers] by 2030.” Without providing specific metrics, the report indicates that “Chinese enterprises will build port networks around the globe, especially investing in port networks in South America, Africa, Southeast Asia, the Middle East, and other developing countries with strategic cooperation with China.” Finally, the report emphasizes China’s role as a global leader in ship financing and marine insurance.⁶⁷

HOW CHINA IS REALIZING ITS MARITIME AMBITIONS: CHINESE MARITIME STATE-OWNED ENTERPRISES

China’s Qing dynasty ruled the country from 1636 to 1912, a period of gradual but persistent incursion by Europeans, and eventually by the Japanese, into Chinese trade and influence. The Opium Wars with the British in the mid-nineteenth century saw Chinese military forces destroyed by the British, who then forced the Chinese to allow the British Empire to import opium into China in exchange for Chinese goods. Thus began “the century of shame,” during which Britain, France, Germany, Russia, and Japan essentially carved China up into spheres of influence.⁶⁸

Following the civil war in China that ended in 1949 with the defeat of Nationalist forces by Communist forces on the mainland and the establishment of the PRC, China’s economy was in complete shambles. For the next several decades, under the absolute rule of Chairman Mao, China essentially pursued a policy of isolationism and self-reliance under which the Chinese people were expected to produce agricultural and manufactured goods without the influence or assistance of outside nations.⁶⁹ Mao’s policies further destroyed the Chinese economy and caused the death of untold millions of people by starvation.

Following Mao’s death in 1976, Deng Xiaoping came to power and relentlessly pursued a policy of opening up China to the rest of the world by boldly seeking foreign investment and trade. Knowing that he could not abandon the façade of communist/socialist ideology, but likely knowing the failures of pure communism and socialism, Deng adhered to a strict policy of pursuing what he called “socialism with Chinese characteristics.”⁷⁰ The Chinese Communist Party continues to use the phrase today. It is purposefully imprecise, but in broad terms it refers to an economy that the state essentially controls while allowing varying degrees of private investment and ownership.

Under Mao’s leadership, state-owned enterprises (SOEs) were established in all sectors of the economy. These SOEs essentially operate as companies owned

by the state. SOEs, in China, typically are managed at a provincial or even municipal level. Others are managed at the central government level by the State-Owned Assets Supervision and Administration Commission (SASAC).⁷¹ The problem—as is typical of many government organizations worldwide—is that SOEs, lacking financial incentives, are inherently inefficient and often become bloated with choking bureaucracies and unproductive workers.

Deng knew this, and therefore introduced market-based reforms, including the potential for private investment and ownership. Notably, Deng focused on commercial shipbuilding as a critical industry, and under his leadership in 1982 the China State Shipbuilding Corporation (CSSC) SOE was established. In 1999, a second SOE was formed out of CSSC: the China Shipbuilding Industry Corporation (CSIC). These two SOEs dominated shipbuilding in China.⁷² In 2019, they were reunited into one larger SOE.⁷³

Over the decades since Deng, the role of SOEs has continued, with them exercising control over certain sectors of the Chinese economy but with private investment in SOEs being introduced to varying degrees and with varying success. (Of Chinese SOEs, 66 percent are listed on the Chinese stock exchange.) Today, privately owned companies actually employ more workers than SOEs, and these privately owned companies account for the majority of China's gross domestic product (GDP).⁷⁴ However, in certain sectors SOEs maintain absolute control. One such sector is the maritime industry, which China views as a strategic industry vital to the interests of the nation.⁷⁵ Despite statements in 2015 from Jin Jiachen, a director at the Shanghai International Shipping Institute, that Chinese ocean-shipping companies would privatize to a large degree, there is little evidence this has happened or will do so.⁷⁶ Furthermore, under Chinese president Xi Jinping there is new emphasis on and support of SOEs and less interest in privatizing many industries, including Chinese maritime industries.⁷⁷

COSCO is an SOE. The company operates a fleet of well over fifteen hundred vessels calling on over a thousand ports worldwide. The COSCO fleet includes most types of merchant ships, such as tankers, bulk ships, roll-on/roll-off (RO/RO) vessels, and containerships. In 2015, COSCO merged with the SOE China Shipping Group, retaining the name of China COSCO Shipping Corporation.⁷⁸ COSCO expanded further in 2017 with the government-funded \$6.7 billion acquisition of Orient Overseas Container Line (OOCL), a public company formerly based in Hong Kong. COSCO now is the third-largest containership operator in the world.⁷⁹ Even before its acquisition of OOCL in 2017, COSCO for a time had taken the lead as the number one container-shipping company in the world. With its acquisition of OOCL and its continued aggressive expansion policies, it is quite possible that COSCO will take the number one spot in container shipping permanently.⁸⁰

For years, the global trend in the container-shipping business has been increasing consolidation, leaving fewer and fewer container-shipping companies. China has taken full advantage of this trend, using the power of COSCO. A United Nations think tank associated with UNCTAD contends that there are now too few container-shipping companies left to ensure adequate competition.⁸¹ By mid-2018, the top ten container-shipping companies carried 75 percent of the world's shipping containers, with COSCO as the number three carrier, carrying over 12 percent of the world's containers. The UNCTAD report notes that the top container companies have formed three alliances that effectively are cartels. On the positive side, these alliances potentially reduce costs and rationalize service, which can lower freight rates; on the other hand, according to UNCTAD, they instead can create a serious risk of establishing corporate oligopolies that will reduce competition and constrain service.⁸² The Ocean Alliance consists of COSCO and CMA CGM (of France); the 2M Alliance links Maersk (of Denmark) and Mediterranean Shipping Company (MSC, of Switzerland); THE Alliance combines Hapag-Lloyd (of Germany), Yang Ming (of Taiwan), and ONE (of Japan). An effort by Maersk, MSC, and CMA CGM in 2014 to form an alliance to be known as the P3 Alliance was blocked by the Chinese government—a clear example of governmental intervention designed to support COSCO. Notably, in 2015 the Export-Import Bank of China (CEXIM) agreed to provide a billion dollars in loans or credit to the French CMA CGM to build new ships—in Chinese shipyards. Since that time, Chinese ties between COSCO and CMA CGM have continued to deepen.⁸³

As noted earlier, in the port sector China is the global leader in owning, leasing, and operating ports and terminals around the world. Most Chinese companies in the port and terminal business are SOEs; these include COSCO, Shanghai International Port Group, China Overseas Port Holdings, and China Shipping Group. China Merchants Holdings and Hutchison Port Holdings are additional Chinese companies engaged in global port ownership and operation that ostensibly are private companies but have Chinese government investment and oversight.⁸⁴ In 2013, China Merchants purchased a 49 percent share of France's CMA CGM's Terminal Link, which operates in many countries, including the United States. Of particular note, reports in September 2019 indicated that China Merchants Holdings was in discussion with CMA CGM to invest further in that company's port assets. These actions give rise to speculation, if not concern, regarding how much more of CMA CGM's shipping and port operations the Chinese will purchase.⁸⁵

China's shipyard sector grew from the 1980s through the first decade of the twenty-first century, with some 1,647 shipyards built in China. By 2010, China had become the number one shipbuilder in the world.⁸⁶ As noted earlier, the

largest Chinese SOEs in the shipbuilding business were CSSC and CSIC; they merged in 2019. Following the financial downturn in 2008, many Chinese private-sector shipyards went bankrupt, while the shipbuilding SOEs received massive government loans and subsidies. By 2014, three-quarters of all new orders went to Chinese SOE shipyards.⁸⁷

Despite possible, if not probable, inefficiencies within maritime SOEs, they enjoy numerous advantages over private-sector companies. They have easy access to huge loans and subsidies from the central government. In 2017, for example, the Chinese government announced it would invest \$26 billion in COSCO over the five-year period ending in 2022. Given that COSCO already is number three in container shipping, an investment of \$26 billion easily could propel the company into the number one spot, possibly leaving in its wake the bankruptcy of other major container-shipping lines, which already are becoming fewer in number each year owing to ongoing consolidation.⁸⁸ In addition to the possible infusion of substantial state funds to help SOEs compete with private-sector Chinese and international companies, SOEs also enjoy blanket protection in times of fiscal downturns and uncertainty, as well as huge preferences in terms of government policies and regulatory treatment.

China can use its substantial market power in shipping to achieve dominance over its competitors. A classic example of this involves the Brazilian corporation Vale SA. Vale is a large iron-ore mining company based in Brazil. As a major consumer of iron ore, China has been a crucial customer of Vale for many years. No doubt to save transportation costs and better manage logistics to China, late in the first decade of the twenty-first century Vale's leadership made the decision to build ultralarge iron-ore bulk carriers instead of chartering vessels to carry the company's iron ore to China.⁸⁹ Vale chose Chinese shipyards to build these vessels. However, when the vessels were completed and began carrying iron ore to China, Chinese officials would not let the Vale bulk ships enter Chinese ports, citing their immense size as a "safety issue." Vale was forced to sell the vessels to COSCO, which in turn leased them back to Vale on long-term charter.⁹⁰ Presumably this somehow must have made the ships safer, because they then were allowed to enter Chinese ports. This is a clear example of protectionism; COSCO's leverage as an SOE prevented Vale from entering the trade except on terms that COSCO accepted.

Chinese government banking entities clearly support the Chinese maritime industry in all sectors, including shipping, ports, and shipbuilding. Huge sums of capital have been made available to the industry for projects that promote Chinese geostrategic goals, not merely normal business investment. The \$26 billion that Chinese banks provided to COSCO, mentioned earlier, is a good example of this. In 2017, the chairman of SASAC noted "the importance of SOEs

as a mechanism for the government to direct the economy and achieve political objectives.”⁹¹

THE “NEW SILK ROAD,” THE BELT AND ROAD INITIATIVE— PART OF CHINA’S MARITIME STRATEGY

China has been an economic and manufacturing powerhouse for much of its very long history. Since ancient times, Chinese goods have found their way west via the overland Silk Road through Central Asia, and eventually they traveled across maritime trade routes through the Indian Ocean that were established by Arab traders. As noted earlier, over the period from the fifteenth century into the twentieth century Europeans gradually eclipsed Arab traders as European countries and companies took virtual control of all Chinese imports and exports, resulting in the “century of shame.” When the PRC was established in 1949, this clearly was a situation its government was determined to change. It has done so slowly but steadily through the decades since 1949.

At the Eighteenth National Congress of the Communist Party of China, in 2012, China for the first time “elevated the construction of a strong maritime country” to the level of a national goal.⁹² By 2013, China had become the world’s dominant commercial maritime industry leader. But far from being content with the country’s maritime achievements, President Xi announced in 2013 that the PRC would establish a 21st Century Maritime Silk Road, later called the One Belt, One Road initiative, and eventually the Belt and Road Initiative (BRI).⁹³ The vast majority of BRI funding comes from Chinese policy banks (SOEs), such as the Chinese Development Bank and CEXIM, as well as large Chinese financial institutions, including the Asia Infrastructure Investment Bank, the New Development Bank, the Industrial and Commercial Bank of China, the Bank of China, the China Construction Bank, and the Silk Road Fund. These institutions are state owned, or at least state controlled. To date, these Chinese financial institutions have invested, or committed to do so, nearly one trillion dollars in loans for ports and terminals, railroads, power plants and grids, and other transportation-related infrastructure.⁹⁴ With little exaggeration, the BRI can be called the most expansive, aggressive, and costly transportation and infrastructure scheme ever developed in human history. Currently, thousands of BRI infrastructure projects already have been built, are under construction, or are in the planning stages.⁹⁵

The Chinese have indicated that the BRI ultimately will involve a total of eight trillion dollars in investments in sixty-eight countries that are home to 65 percent of the world’s population.⁹⁶ Its two major initiatives are the Silk Road Economic Belt, an overland route to Europe via railroads and roads, and the Silk Road Maritime Road, an east–west route via the sea. While the BRI has both land and sea components, the maritime aspect is the dominant one by far. In 2016,

for example, 1,700 trains carried cargo from China to Europe via land corridors through Central Asia, carrying an estimated 150,000 containers. With BRI investments in these corridors, the Chinese estimate that in 2020 the number of containers carried by BRI roads and railroads will have risen to five hundred thousand. By comparison, the maritime sea routes from China to Europe in 2014 alone carried some twenty-two million containers, and BRI investments along the Maritime Silk Road are projected to increase this number greatly in the years ahead.⁹⁷ According to the Chinese government, there are three “blue passages,” or BRI maritime routes, one of which runs “from China to Africa and the Mediterranean, another to Oceania [in the Pacific] and South Pacific, and a third through the Arctic to Europe.”⁹⁸ The BRI also includes projects in Latin America and the Caribbean. Another major BRI initiative is known as the Digital Silk Road.⁹⁹

President Xi has thrown the full weight of his leadership and reputation behind the BRI, and it is hard to overemphasize the full implications of this massive initiative. The BRI may be an outgrowth of former Chinese president Jiang Zemin’s Going Out policy; however, it is much more prodigious in scale. At the Nineteenth Party Congress, in 2017, Xi projected that “by 2050, China will have become a global leader in terms of composite national strength and international influence.” The BRI is a major factor enabling this evolution to happen at present, and that will continue to be so. Currently, China’s maritime industry—its “blue economy”—already represents 10 percent of the country’s GDP, and this number will increase as maritime BRI projects reach fruition.¹⁰⁰

China’s public statements on the BRI note “that BRI will greatly benefit humankind and create a new era of world trade and globalization.”¹⁰¹ According to the official Chinese news agency Xinhua, the purpose of the BRI is to “promote policy coordination (between countries), connectivity of infrastructure, unimpeded trade, financial integration, and people-to-people bonds.” Xinhua goes further to suggest that, among other things, the BRI “will improve the marine environment, promote development and eradicate poverty, enhance cooperation on marine resource utilization, upgrade marine industry cooperation, facilitate maritime transport, strengthen connectivity of information and networks, improve security and search and rescue, and create innovative growth.”¹⁰² These are lofty goals, and it can be argued that there is some truth in many of these claims.

It is important to understand, however, that from a Chinese perspective the BRI has many additional advantages. Successful efforts under the BRI will increase export markets for China, which means more money and jobs in China. BRI projects themselves provide jobs for Chinese construction companies and tens of thousands of Chinese construction workers, since one of the prerequisites for a country to accept BRI funding is to employ Chinese construction companies

and allow Chinese workers to build the targeted infrastructure in whatever country receives the BRI loans.¹⁰³ In BRI port projects, Chinese companies and workers provide everything: finance, design, construction, operation, even dredging.¹⁰⁴ The Chinese construction companies that build BRI infrastructure are almost all SOEs, such as the China Communications Construction Company, the China Harbor Engineering Company, and the China Road and Bridge Corporation.¹⁰⁵

However, there are many drawbacks and concerns regarding BRI. Some analysts conclude that in many cases BRI is nothing more than a “debt trap.” Poorer nations that accept BRI infrastructure funding eventually become unable to fulfill debt payments, resulting in Chinese takeover of the infrastructure. A 2018 study completed by the Center for Global Development noted that “twenty-three countries are at risk of debt distress as a result of BRI loans from China.”¹⁰⁶ The port of Hambantota in Sri Lanka is a clear example of this. The Sri Lankan government received a Chinese BRI loan of one billion dollars to build a new port. By 2017, Sri Lanka was unable to repay the loan. This resulted in China obtaining a ninety-nine-year lease to control the port completely.¹⁰⁷ In another instance, in October 2019 the following was noted in testimony before the U.S. Congress: “In 2019, the Kenyan newspaper *Daily Nation* reported it had obtained a leaked copy of the agreement between China and Kenya for the construction [under BRI] of the Mombasa–Nairobi Standard Gauge Railway Project. According to Kenyan media, the contract states that China could take possession of the port of Mombasa should the Kenyan National Railway Corporation default on its \$2.2 billion repayments to China’s Exim Bank.”¹⁰⁸

Chinese loans often are provided at a higher interest rate than comparable loans from other countries and sources. The Chinese SOE banks are successful in securing these loans at the higher rates because, in most cases, for a variety of reasons, funds would not be available from any other source. In some cases, Chinese loans are sought because they do not come with the specific requirements (“strings”) attached that other sources, such as the World Bank, often impose on those seeking a loan. In the case of the port of Hambantota, for example, no competitors were interested in providing Sri Lanka a loan.¹⁰⁹

There are also real fears (and examples) of BRI funding leading to local corruption. Chinese companies involved in BRI projects have been “accused of corruption and collusion with local politicians in Equatorial Guinea, Malaysia, and Bangladesh, among many other countries.”¹¹⁰ The BRI SOE China Communications Construction Company and all its subsidiaries have been shown, in multiple instances, to have used bribes to officials and their families in many countries where the company and its subsidiaries had business or planned to conduct business.¹¹¹

Perhaps most troubling are the political influence and favors that Chinese authorities demand in exchange for BRI funding.¹¹² Via such funding in 2016, China's SOE COSCO obtained a controlling interest (51 percent) in the port of Piraeus in Greece; this proportion was due to increase to 67 percent in 2020.¹¹³ It comes as little surprise that in 2017 Greece and Hungary (also a recipient of BRI funding) vetoed a "joint EU [European Union] statement criticizing China based on human rights." The year before, both countries had refused to sign a joint EU statement that criticized China's actions in the South China Sea.¹¹⁴

In some cases, BRI projects have failed to produce tangible benefits for countries even while at the same time saddling them with debt. Vanuatu is a case in point. Under the BRI, the Chinese constructed a new cruise-ship pier in the country, at a cost of one hundred million dollars. Once completed, however, the new facility failed to meet expectations and adversely affected the country's economy.¹¹⁵

As *Forbes* notes, "there are often some key differences between how Chinese maritime companies operate internationally and what their projects look and feel like. . . . While China's new array of port holdings are fundamentally economically motivated projects, there is a glaring political dimension as well." By controlling major ports in key countries, China maintains more control over its import and export supply chains. Through investment and ownership, China in many cases can exercise political influence over other countries and help ensure that these countries stay friendly to Chinese interests. According to *Forbes*, "China is creating a new paradigm in the twenty-first century where economic leverage is the key."¹¹⁶ In African countries, through loans and BRI investments, China has gained considerable political leverage. In Djibouti, for example, China holds over 80 percent of the nation's debt. In Zambia, it is reported that China will take over the power grid because of the country's inability to pay back Chinese loans.¹¹⁷ Following the 2008 financial crisis, Iceland was in serious financial peril as a result of banking failures. In response to this, and in the absence of EU and U.S. support, Iceland accepted Chinese loans and investments that stabilized the economy. Since that time, Chinese-Icelandic relations have blossomed, which provides support for China's BRI efforts in the Arctic.¹¹⁸

SUMMING UP THE THREATS FROM CHINESE MARITIME DOMINANCE

In all respects, China is a global power, and the United States and other countries can expect it to assert its interests, as is normal. However, as numerous observers have noted, in some industries China has acted in a particularly aggressive manner, with a determination to dominate those industries globally. This certainly is the case with the maritime industry. While Chinese SOEs in the maritime industry certainly seek to make money, they also serve the political interests of

the Chinese state, and in some instances they take actions that result in *expected* financial losses because those actions serve the policy goals of the Chinese government. While it is true that Chinese initiatives such as the BRI stand to benefit dozens of countries and their populations in some ways, Chinese BRI funding and the related maritime dominance give China sizable political leverage and influence. According to Carolyn Bartholomew, chairman of the U.S.-China Economic and Security Review Commission, a “major goal of BRI [and the concurrent dominance of China’s maritime shipping industry] is to open more markets for Chinese goods, displacing goods and services currently provided by the U.S. and other countries.”¹¹⁹ Since the United States has retreated almost completely from the global maritime industry through a lack of interest in U.S.-flag shipping and international port ownership and operation, Chinese goals of controlling access to overseas markets have become ever easier to achieve.

As China’s maritime dominance in shipping, global port ownership, maritime finance, and shipbuilding continues to grow—as is expected and detailed in Chinese strategic plans and documents—China concurrently will gain political power and influence. It would be naive to think this will not affect nations around the world, including the United States and members of the EU. One only need consider the recent debacle that occurred during the summer of 2019 when a National Basketball Association (NBA) general manager expressed support for protesters in Hong Kong. The government in Beijing was outraged and demanded an apology. The situation threatened the NBA’s multibillion-dollar business in China. The result: the NBA backpedaled. The association released a statement in English that “affirmed both Beijing’s concerns and the league’s support for individuals educating themselves and sharing their views on matters of importance to them.” But—unbeknownst to most people—the NBA also issued a different statement in Mandarin that stated, “We are extremely disappointed in the inappropriate comments by the General Manager.”¹²⁰ Similarly, a flight attendant working for a subsidiary of Cathay Pacific, an airline based in Hong Kong, voiced her support for the Hong Kong protesters. The PRC government ordered the airline to dismiss the flight attendant, and it did so.¹²¹ While these events were relatively minor, one only can imagine the demands that China could make on countries, including the United States, given further dominance in the global maritime industry. In 2016, for example, the Dalai Lama visited Mongolia, which greatly displeased the Chinese. So China closed its border with Mongolia—which is landlocked. This severely affected Mongolia’s economy.¹²² In yet another example of Chinese bullying, a November 2019 *New York Times* article noted that Chinese officials recently had been outraged with the Czech Republic. Developing relations between the two countries and massive Chinese “investment, trade, and business deals” had prompted the Czech president to declare that “the Czech

Republic would become China's gateway to Europe." All was well until various events caused Czech leaders to question the commitment their country had made to the "one China" policy, and even to venture to demonstrate support for Taiwan. The result was soured relations with the Chinese, who then backed away from PRC-Czech business deals. China even implemented a policy restricting Chinese tourists from visiting Prague.¹²³ Recent history is replete with other examples of China bullying countries and companies, including firms in the United States, into complying with its wishes—"or else." Increasing dominance in the global maritime industry through ship and port ownership, maritime financing, and BRI funding will ensure the Chinese have ever-increasing leverage to do the same in the decades ahead. Meanwhile, the United States stands idly by. As far as international shipping and port operations are concerned, the United States has absolutely no leverage at all. What is worse is that lack of action on the part of the United States clearly threatens America's global trade.

Chinese control in the global maritime industry is the result of aggressive strategic planning coupled with favorable government policies backed by the power of SOEs and subsidies and other forms of government funding. There simply is no way for private-sector companies in the global industry to compete with this on their own. No matter what the economic conditions, SOEs have access to massive capital that the private sector simply cannot marshal. Further, to protect SOEs, the Chinese government can restrict outsiders' ability to compete and can enact laws and implement other policies that benefit its SOEs—and it has done so. The Chinese have shown themselves to be masters at this as they developed and promoted their maritime industries over decades.

A major concern is that the global maritime industry has been consolidating in all sectors, meaning that with each passing year there are fewer and fewer companies in all sectors of the industry. This is true in shipbuilding, ship operation, and port ownership and operation, despite the fact that the industry continues to grow as the global economy becomes more integrated.

Container shipping is but one powerful example of this. Forty years ago, it would have been difficult, if not impossible, to identify all the ocean shipping companies that operated freight vessels carrying global trade; there were hundreds of such concerns, including dozens of U.S.-flag companies. Today, container-shipping companies carry some 60 percent of all seagoing trade, and there are many more and larger vessels carrying freight (now mostly in shipping containers). But the number of companies has been reduced drastically through acquisitions and mergers. In early 2018, the top fifteen containership operators carried 70 percent of the global trade; just six months later the number had been reduced to ten companies carrying the same portion of the trade.¹²⁴ In 2019, the top five companies carried the majority of shipping containers.¹²⁵ In order by size, these

were A.P. Moller / Maersk (Danish), Mediterranean Shipping Company (Swiss), COSCO (Chinese), CMA CGM (French, with an association with COSCO), and Hapag-Lloyd (German). The existence of fewer and fewer companies restricts competition and can affect service. As noted in an earlier section, UNCTAD contends that too few container-shipping companies remain to ensure adequate competition.¹²⁶

To make matters worse, the companies noted above operate within only three shipping alliances, which also include smaller companies. These shipping alliances are essentially cartels, thereby further restricting competition. These alliances—the 2M Alliance, the Ocean Alliance, and THE Alliance—together control 91 percent of global container shipping.¹²⁷ The large numbers of megacontainerships built over the past few years or on order have created overcapacity that will linger for many years. This has resulted, and for the foreseeable future will continue to result, in lower freight rates, which could force other companies out of business, spurring even more consolidation in the industry.¹²⁸ The largest of the container-ship operators, Maersk, even has suggested that severe competition will result in only three large companies carrying the vast majority of global trade in containers—no doubt with China’s COSCO being one of those three, if not number one.¹²⁹

The presence of fewer and fewer companies in any industry tends to result in higher costs to consumers and poorer service. As COSCO takes more control over the world’s container shipping, the Chinese government will gain more and more political leverage over countries that rely on its container-shipping services and port ownership and operation for their international trade. Economic theory suggests that if there are too few companies in an industry, such that service and pricing affect consumers adversely, new companies will form to enter the industry, improve competition, and positively affect costs and service.

Unfortunately, this will not happen in the ocean shipping industry—unless host governments subsidize the new companies. Entering the global shipping industry, particularly container shipping, requires billions of dollars and many years to build vessels, establish service, and obtain port and intermodal connections. It would take years to receive positive returns on investment, and the likelihood of positive returns would be questionable in any case. In other words, the likelihood of attracting investors to form new container-shipping companies is poor, given the economics and time considerations involved.

Still another concern is the current profit margins in container shipping. One of the reasons the industry has consolidated is that in trying to compete and in building large fleets of megacontainerships, freight rates have been driven down, which has pushed companies and investors out of the industry, fueling ongoing mergers and acquisitions that have reduced the number of companies drastically. Naturally, investors are motivated by profits, and if profits are lacking there is an

understandable desire to sell unprofitable assets and move on to greener pastures. With the power of subsidies and other forms of government financing as well as favorable legislation and policy assistance, Chinese SOEs in shipping and the maritime industry at large can weather financial storms and economic downturns. They further have the funding and capability to buy out private-sector companies during economic downturns. Yes, Chinese SOEs, like private-sector companies, are motivated by profit, but they also are motivated by Chinese government policy and political ambitions.

This all makes for a potentially dangerous situation as far as the global container-shipping industry is concerned. For example, A.P. Moller / Maersk is a public company owned largely by the Maersk family and other investors; MSC is completely privately owned, by a Swiss family; and CMA CGM is a public company owned by investors, as is Hapag-Lloyd. What will happen if global container rates, already depressed, reach a point at which shipping families and investors grow tired of poor profit margins and decide to withdraw from the business to put their funds into more-profitable ventures? In December 2018, Moody's cut Maersk's credit rating—already not the best—from Baa2 to Baa3, “which is at the bottom of the investment grade bond rating.”¹³⁰ In the fall of 2019, CMA CGM reported a second straight quarterly loss and, as was noted earlier, previously had sold 49 percent of its global port-operations entity, Terminal Link, to a Chinese company to reduce its debt. (There are no data on the second-largest container-shipping company, MSC, because it is entirely privately owned by a Swiss family.) In total, container shipping worldwide is on shaky ground, and further consolidation is likely. This author speculates that the Chinese government, through COSCO and other Chinese companies, will be more than happy to purchase any containership companies that fail. This happened as recently as 2017, when COSCO purchased the 150-year-old OOCL. So further consolidation in the container-shipping industry is possible, with China benefiting and COSCO taking even more dominant control of the global industry, which will result in greater leverage, political and otherwise, for the Chinese government.

Throughout, this article has referred numerous times to how the Chinese government subsidizes the country's maritime industries in every sector, and the degree to which it does so. This is despite the fact that in 2001 China became a member of the World Trade Organization (WTO). WTO rules expressly prohibit government subsidies.¹³¹ In the maritime sector, the Chinese simply ignore these WTO rules, and apparently the rest of the world acquiesces. One Harvard study indicated that in the shipbuilding industry alone China subsidized shipyard costs by between 13 and 20 percent from 2006 through 2016.¹³² It is clear that vast Chinese government funding has been provided to ocean-shipping giant COSCO as well. Given the implied acceptance of this by the rest of the world

and on the basis of past performance, there is no reason to expect the Chinese to stop subsidizing their maritime industries. One might argue that Chinese government subsidies of the country's maritime industry benefit other nations and people by providing lower-cost shipping, but subsidies distort the market and ultimately can result in the creation of oligopolies or even monopolies, which then can dictate service and costs, and in the case of China can exert political influence as well.

While China merely is poised to dominate the world's container shipping, it already dominates shipbuilding and global port ownership and operation. For decades, the top three shipbuilding countries in the world have been Japan, Korea, and China. Over 40 percent of the world's commercial ships now are built in China, and this percentage is growing as shipyards in other countries no longer can compete and so cease to operate.¹³³ China is the global leader in ship finance by providing funds for international shipping companies seeking to buy and build ships, particularly in Chinese shipyards.¹³⁴ This means that, although China may not own or operate large numbers of the world's commercial ships, it has influence, if not control, over more than just Chinese-owned ships, because it holds the mortgages on a major percentage of ships owned or operated by companies throughout the world. In 2017, for example, Chinese SOE banks provided ship-construction loans of over twenty billion dollars, primarily for construction in Chinese shipyards. Chinese strategic plans call for China to increase its leadership in ship-construction financing in the decades ahead.¹³⁵

From a military point of view, in 2015 the Chinese government issued new guidelines to Chinese shipping companies and shipyards, *Technical Standards for New Civilian Ships to Implement National Defense Requirements*. These guidelines lay out construction and equipment requirements to ensure that Chinese ships can support the forces of the People's Liberation Army, including the People's Liberation Army Navy (PLAN). These guidelines pertain to containerships, RO/RO vessels, bulk ships, and general-cargo ships.¹³⁶ These measures will give China—as the number one shipowner in the world, with thousands of ships under its control—unparalleled strategic sealift capabilities, if not greater overt military power.

Also a matter of concern is the possibility that ports that China constructs or operates under a BRI initiative ultimately may be used by its military, particularly the PLAN. The Chinese already have constructed and are using a PLAN base in Djibouti. In July 2019, the Chinese defense minister commented that “China is willing to deepen military exchanges and cooperation with the Caribbean countries and Pacific island countries under the framework of OBOR [BRI].” Chinese laws compel Chinese companies and SOEs to comply with requests and demands from Chinese security and intelligence organizations and the military. This enables these agencies to have global and easy access to intelligence in

the sixty-eight countries receiving BRI funding and throughout the thousands of other maritime and BRI projects. Chinese intelligence agencies will benefit further as BRI funds are made available to install Huawei 5G equipment in BRI ports and terminals throughout the world.¹³⁷ When COSCO gained ownership and control in the Greek port of Piraeus, for example, the company replaced the network infrastructure with all-Huawei equipment.¹³⁸

Senior U.S. military personnel and members of Congress have raised the concern that Chinese dominance in the port industry around the world ultimately could restrict access to critical ports the U.S. Navy needs. Chinese intelligence agencies' obvious penetration into these ports will affect U.S. military interests and security adversely.¹³⁹ Might China, through its BRI funding or through bribes, demand that foreign governments deny access to the U.S. military? It is a very real possibility. Djibouti, for example, has been a recipient of BRI funding, and China holds the majority of Djibouti's debt. As noted, the country now has a PLAN military base. Djibouti also happens to be an important logistics hub for the U.S. Navy and the U.S. Central Command. Might the Djiboutian government restrict or deny USN access to this base as a result of Chinese influence, funding, or bribes?¹⁴⁰ Might this same tactic be used in other regions of the world where the U.S. Navy and other elements of the U.S. military operate?

In 2015, Michael P. Pillsbury, the director of the Center on Chinese Strategy at the Hudson Institute, authored a book, *The Hundred-Year Marathon: China's Secret Strategy to Replace America as the Global Superpower*. The title supplies the book's thesis. The author is not only a China expert but a fluent speaker and writer of Mandarin, which gives him particular insights into what the Chinese really are thinking. As he frequently notes in the book, the Chinese often say one thing in an English text but something completely different in the Chinese version of the same text. With this approach, the Chinese often are able to fool Western scholars, journalists, and political leaders who do not read and write Mandarin about what their true motives are. In fact, Pillsbury notes that one of the main strategies the Chinese have used throughout their history has been to deceive others about their true intentions. The ancient Chinese military thinker Sun-tzu, for example, emphasized the importance of deception more than any other military doctrine.¹⁴¹

Yet as the Chinese have become the world leader in all aspects of the global maritime industry, including ship ownership, port and terminal ownership and operations, shipbuilding, ship finance, and maritime education, they have demonstrated plainly their intention to use the maritime industry to further the strategic, economic, and political goals of the PRC. Dominance in the maritime industry, along with concurrent multitrillion-dollar efforts through the BRI,

will give China truly unparalleled power. The Chinese clearly are trying to sell a positive message—that these efforts are designed “to kindle a new era of globalization, a golden age of commerce that will benefit all. . . . As Western countries move backwards by erecting walls, China is contriving to build bridges, both literal and metaphorical.”¹⁴² And to be sure, there are positive aspects to what the Chinese are doing. China’s decades-long dominance in manufacturing has provided the world with a plethora of consumer goods at moderate prices, which has raised the standard of living for people around the world. Not surprisingly, the Chinese are pursuing maritime ambitions as a source of revenue, trade, and jobs for the Chinese people as well. These alone are not nefarious actions. Still, huge Chinese maritime SOEs with access to massive government funds and subsidies and the protection of Chinese laws and policies give the Chinese government astonishing political leverage and control—on a scale potentially greater than anything seen in human history.

There are those in the EU and the United States who have expressed concerns over BRI and the global dominance of the Chinese maritime industry. But these voices are too few and too often essentially have been ignored, leaving a lack of action by Western governments. If the Chinese are not “secretly planning to replace the U.S. as the global superpower,” as Pillsbury suggests, they seemingly are attempting something very close to it. Their actions prove this, and the West’s inaction makes their success more possible every day. The time is long overdue for the United States to reinvigorate its maritime industries and challenge the Chinese in the same game by using the very same techniques the Chinese have used to gain dominance in the global maritime industry. The private-sector maritime industry cannot do this alone—the U.S. maritime industry simply cannot compete against the power of the Chinese state. The United States and allied governments must bring to bear substantial and sustained political action, policies, and financial support. To do anything less is to cede control of the world’s maritime industry and global supply chains to China, and perhaps to force the United States and its allies to enter their own “century of shame.”

NOTES

1. The Roosevelt epigraph is from “Quotes about American Merchant Marine by Presidents, Military Leaders, National Figures, and Others,” American Merchant Marine at War, usmm.org/.
2. The second epigraph is from *China’s Maritime Silk Road Initiative: Implications for the Global Maritime Supply Chain; Hearing before the Subcomm. on Coast Guard and Maritime Transportation of the H. Comm. on Transportation and Infrastructure*, 116th Cong. (2019) (opening statement of Sean Patrick Maloney, subcommittee chairman).
3. Andrew Gibson and Arthur Donovan, *The Abandoned Ocean: A History of United States Maritime Policy* (Columbia: Univ. of South Carolina Press, 2000), pp. 23–24.

4. During the 1979–80 time frame, the author was serving as second officer on Lykes Lines' SS *Solon Turman* and received frequent reports on the activity of SS *Letitia Lykes*.
5. U.S. Transportation Dept., "Number and Size of the U.S. Flag Merchant Fleet and Its Share of the World Fleet," *Bureau of Transportation Statistics*, bts.gov/.
6. "Watery Grave? What Will Happen to the American Fleet?," *Time*, 13 September 1943, p. 82; Daniel Marx Jr., "The Merchant Ship Sales Act of 1946," *Journal of Business of the University of Chicago* 21, no. 1 (January 1948), pp. 17–28.
7. "Panama Canal Treaty of 1977," *U.S. Department of State Archive*, 2001–2009, state.gov/.
8. Alfred Thayer Mahan, *The Influence of Sea Power upon History* (Boston: Little, Brown, 1890), pp. 27–28.
9. Jeffrey Safford, "World War I Maritime Policy and the National Security, 1914–1919," in *America's Maritime Legacy: A History of the U.S. Merchant Marine and Shipbuilding Industry since Colonial Times*, ed. Robert A. Kilmarx (Boulder, CO: Westview, 1979), quoted in Gibson and Donovan, *The Abandoned Ocean*, p. 104.
10. Gibson and Donovan, *The Abandoned Ocean*, pp. 112–14.
11. Robert G. Albion and Jennie B. P. Albion, *Sea Lanes in Wartime: The American Experience, 1775–1942* (New York: Archon Books, 1968), p. 332.
12. Michael J. Rauworth, "Probing the Mysteries of the Jones Act—Part 2," *Sea History* Autumn 2017, p. 28.
13. Gibson and Donovan, *The Abandoned Ocean*, p. 23.
14. Gerald R. Jantscher, *Bread upon the Waters: Federal Aids to the Maritime Industries* (Washington, DC: Brookings Institution, 1975), p. 333.
15. Gibson and Donovan, *The Abandoned Ocean*, pp. 112–14, 174–75.
16. Jantscher, *Bread upon the Waters*, p. 65.
17. Mark V. Arena et al., *Why Have Navy Ship Costs Risen?*, RB-9182-NAVY (Santa Monica, CA: RAND, 2006), available at www.rand.org/.
18. U.N. Conference on Trade and Development [hereafter UNCTAD], *Review of Maritime Transport 1980*, U.N. Doc. TD/B/C.4/222/Rev.1, U.N. Sales No. E.83.II.D.4 (1983), available at unctad.org/.
19. Aaron Klein, "Decline in U.S. Shipbuilding Industry: A Cautionary Tale of Foreign Subsidies Destroying U.S. Jobs," *Eno Center for Transportation*, 1 September 2015, enotrans.org/.
20. *U.S. Maritime and Shipbuilding Industries: Strategies to Improve Regulation, Economic Opportunities, and Competitiveness; Hearing before the Subcomm. on Coast Guard and Maritime Transportation of the H. Comm. on Transportation and Infrastructure*, 116th Cong. (2019) (statement of Mark H. Buzby, Administrator, Maritime Administration, U.S. Transportation Dept.), available at www.transportation.gov/.
21. Arena et al., *Why Have Navy Ship Costs Risen?*
22. Klein, "Decline in U.S. Shipbuilding."
23. *Conservapedia*, s.v. "Construction Differential Subsidy," www.conservapedia.com/.
24. U.S. General Accounting Office, *Ready Reserve Force: Ship Readiness Has Improved, but Other Concerns Remain*, GAO/NSIAD-95-24 (Washington, DC: 1994), available at gao.gov/.
25. U.S. Transportation Dept., "Maritime Security Program (MSP)," *Maritime Administration*, maritime.dot.gov/.
26. "Maritime Security Program Extended," *Seafarers International Union*, 30 December 2019, seafarers.org/.
27. UNCTAD, *Review of Maritime Transport 2018*, UNCTAD/RMT/2018 (2018), pp. 30, 35.
28. *U.S. Maritime and Shipbuilding Industries* (Buzby statement).
29. John McCown, "Commentary: Cato's Jones Act Numbers Wrong," *American Shipper*, 23 July 2019, freightwaves.com/.
30. For a thorough analysis of the issues and problems involved in eliminating the Jones Act, see Christopher J. McMahon [Rear Adm., USMS], "Double Down on the Jones Act?," *Journal of Maritime Law and Commerce* 49, no. 2 (April 2018).
31. "Locations," *SSA Marine*, ssamarine.com/.

32. Chris Dupin, "Foreign Investments in U.S. Ports Face Government Scrutiny," *American Shipper*, 22 April 2018, freightwaves.com/.
33. Frank Fang, "Chinese Investments in Panama Draw Concerns about Corruption, Challenges to U.S. Interests," *Epoch Times*, 6 December 2018, epochtimestoday.com/.
34. Lo Jung-pang, *China as a Sea Power 1127–1368: A Preliminary Survey of the Maritime Expansion and Naval Exploits of the Chinese People during the Southern Song and Yuan Periods*, ed. Bruce A. Elleman (Singapore: National Univ. Press of Singapore, 2012), pp. 23–25.
35. *Ibid.*
36. Zheng Yangwen, *China on the Sea: How the Maritime World Shaped Modern China*, *China Studies* 21 (Leiden, Neth.: Brill, 2012), p. 5.
37. Lo, *China as a Sea Power*, pp. xii, xiv–xvi.
38. Andrew Wilson, "The Maritime Transformation of Ming China," in *China Goes to Sea: Maritime Transformation in Comparative Historical Perspective*, ed. Andrew Erickson, Lyle J. Goldstein, and Carnes Lord (Annapolis, MD: Naval Institute Press, 2009), pp. 249–51, 268–71.
39. *Ibid.*, pp. 251–52.
40. Louise Levathes, *When China Ruled the Seas: The Treasure Fleet of the Dragon Throne, 1405–1433* (New York: Oxford Univ. Press, 1994), pp. 20–21.
41. *Ibid.*, p. 20.
42. Wilson, "The Maritime Transformation of Ming China," p. 239.
43. Erickson, Goldstein, and Lord, *China Goes to Sea*, p. xix.
44. Bruce Elleman, "The Neglect and Nadir of Chinese Maritime Policy under the Qing," in *China Goes to Sea*, ed. Erickson, Goldstein, and Lord, pp. 312–13.
45. David G. Muller Jr., *China as a Maritime Power* (Boulder, CO: Westview, 1983), pp. 58–62.
46. Takeda Jun'ichi, "China's Rise as a Maritime Power," *Review of Island Studies*, 23 April 2014, p. 4, spf.org/.
47. Muller, *China as a Maritime Power*, pp. 117–23. Through 1967, the entire PRC foreign-flag fleet numbered thirty-four ships, all under British flag.
48. *Ibid.*, pp. 118, 121–22.
49. *Ibid.*, p. 188.
50. *Ibid.*, pp. 184, 189–90.
51. UNCTAD, *Review of Maritime Transport 2018*, pp. 30, 35.
52. James Kynge et al., "How China Rules the Waves—FT Investigation: Beijing Has Spent Billions Expanding Its Port Network to Secure Sea Lanes and Establish Itself as a Maritime Power," *Financial Times*, 12 January 2017.
53. "Major Marine Terminal Operators Worldwide in 2018, Based on Equity-Adjusted Throughput," *Statista*, statista.com/.
54. Mathieu Duchâtel and Alexandre Sheldon Duplaix, "Blue China: Navigating the Maritime Silk Road to Europe," *European Council on Foreign Relations*, 23 April 2018, p. 15, ecfr.edu/.
55. Kynge et al., "How China Rules the Waves."
56. *China's Maritime Silk Road Initiative* (statement of Carolyn Bartholomew, chairwoman, U.S.-China Economic and Security Review Commission), p. 21.
57. UNCTAD, *Review of Maritime Transport 2018*, p. 66.
58. Mercy A. Kuo, "The Power of Ports: China's Maritime March; Insights from Sam Beatson," *The Diplomat*, 8 March 2017, thediplomat.com/.
59. *China's Maritime Silk Road Initiative* (Bartholomew statement), p. 22.
60. "China Leads in Global Shipbuilding Industry in 2017," *Hellenic Shipping News*, 1 December 2018, hellenicshippingnews.com/.
61. Vinayak Bhat [Col., Indian Army (Ret.)], "High-Speed Production: Chinese Navy Built 83 Ships in Just Eight Years," *The Print*, 20 September 2017, theprint.in/.
62. Andrew S. Erickson, "Maritime Numbers Game: Understanding and Responding to China's Three Sea Forces," *Indo-Pacific Defense Forum Magazine*, December 2018, pp. 30–35, available at www.andrewerickson.com/.
63. Zhang Hongzhou, "China's Fishing Industry: Current Status, Government Policies, and

- Future Prospects” (paper presented at the CNA Maritime Power Conference, Arlington, VA, 28–29 July 2015), p. 1.
64. Dennis Blasko, “China’s Merchant Marine” (paper presented at the CNA Maritime Power Conference, Arlington, VA, 28–29 July 2015), pp. 18–19.
 65. Virginia Marantidou, “Shipping Finance: China’s New Tool in Becoming a Global Maritime Power,” *Jamestown Foundation China Brief* 18, no. 2 (February 2018).
 66. *China’s Maritime Silk Road Initiative* (Bartholomew statement), p. 25.
 67. “China Shipping Development Outlook 2030,” *Shanghai International Shipping Institute*, March 2015, en.sisi-smu.org/.
 68. Tom Harper, “How the Century of Humiliation Influences China’s Ambitions Today,” *Imperial & Global Forum*, 11 July 2019, imperialglobalexeter.com/.
 69. Richard Baum, *The Fall and Rise of China* (Chantilly, VA: Teaching Company, 2010), DVD.
 70. “Deng Xiaoping: Socialism with Chinese Characteristics,” *Works & Days*, 2020, newlearningonline.com/, drawn from *People’s Daily*, 1984.
 71. “State-Owned Enterprises in the Chinese Economy Today: Role, Reform, and Evolution,” *University of Alberta China Institute*, p. iii, ualberta.ca/.
 72. Howard J. Dooley, “The Great Leap Outward: China’s Maritime Renaissance,” *Journal of East Asian Affairs* 26, no. 1 (Spring/Summer 2012), p. 61.
 73. Minnie Chan, “Merger of China’s Shipbuilding Giants Gets the Green Light,” *South China Morning Post*, 26 October 2019, scmp.com/.
 74. Joseph Davis, “SOE Reforms—China’s Path to Higher Productivity,” *Vanguard Research*, July 2017, p. 3, institutional.vanguard.com/.
 75. “State-Owned Enterprises in the Chinese Economy Today,” p. 9.
 76. Greg Knowler, “China Committed to Reforming Its State-Dominated Shipping Sector,” *Journal of Commerce*, 16 June 2015, joc.com/.
 77. Gwynn Guilford, “China’s Latest Refusal to Fix Its State-Owned Companies Is Bad News for the Global Economy,” *Quartz*, 16 September 2015, qz.com/.
 78. Christopher R. O’Dea, “Ships of State?,” *Naval War College Review* 72, no. 1 (Winter 2019), p. 65.
 79. Ben Bland, “Why China’s Global Shipping Ambitions Will Not Easily Be Contained,” *Financial Times*, 17 July 2017, ft.com/.
 80. Mike Schuler, “COSCO Takes Biggest Container Line Title from Maersk,” *gCaptain*, 29 November 2017, gcaptain.com/.
 81. Tom Miles, “Shipping Getting Anti-competitive for Smallest States, U.N. Says,” *Reuters*, 14 October 2015, reuters.com/.
 82. UNCTAD, “Market Consolidation in Container Shipping: What Next?,” UNCTAD Policy Brief 69, *UNCTAD: Prosperity for All*, September 2018, unctad.org/.
 83. O’Dea, “Ships of State?,” pp. 70–72. A U.S. subsidiary of CMA CGM operates container-ships that are part of the Maritime Administration’s Maritime Security Program, which is critical to America’s military sealift.
 84. Frans-Paul van der Putten and Minke Meijnders, “Chinese Involvement in Foreign Ports,” chap. 2 in *China, Europe and the Maritime Silk Road* (The Hague, Neth.: Clingendael Institute, 2015), available at clingendael.org/.
 85. “China Merchants in Talks to Invest in CMA CGM Assets,” *Bloomberg*, 2 September 2019, bloomberg.com/.
 86. Jasmine Wang and Kyunghye Park, “China Poised to Gain Control as Shipyard Shake-out Looms,” *Bloomberg*, 12 August 2013, bloomberg.com/.
 87. Pradeep Rajan, Keith Tan, and Meghan Gordon, “China’s Shipbuilding Sector Must Consolidate to Stay Competitive: Official,” *S&P Global: Platts*, 7 November 2013, spglobal.com/.
 88. Gary Ferrulli, “How China Could Dominate the Global Shipping Scene,” *Journal of Commerce*, 21 January 2017, joc.com/.
 89. At four hundred thousand deadweight tons, the ships represented the largest bulk ships ever built.
 90. Frans-Paul van der Putten and Minke Meijnders, “Chinese Activities at Sea,” chap. 3 in *China, Europe and the Maritime Silk Road*.

91. O’Dea, “Ships of State?,” pp. 76–77.
92. Duchâtel and Sheldon Duplaix, “Blue China,” p. 4.
93. “Vision for Maritime Cooperation under the Belt and Road,” *Xinhuanet*, 20 June 2017, www.xinhuanet.com/.
94. Wendy Wu, “Who Will Pay for China’s New Silk Road?,” *South China Morning Post*, 11 May 2017, scmp.com/.
95. *China’s Maritime Silk Road Initiative* (statement of Jonathan Hillman, Director, Reconnecting Asia Project, Center for Strategic and International Studies), p. 42.
96. Anna Bruce-Lockhart, “China’s \$900 Billion New Silk Road: What You Need to Know,” *World Economic Forum*, 26 June 2017, weforum.org/.
97. Michal Makocki, “China, the New Silk Road and the EU’s Eastern Neighbourhood,” chap. 2 in *Third Powers in Europe’s East* (Paris: European Union Institute for Strategic Studies, 2018), pp. 23–24, available at jstor.org/.
98. *China’s Maritime Silk Road Initiative* (Hillman statement), p. 44.
99. *China’s Maritime Silk Road Initiative* (Bartholomew statement), p. 20.
100. Duchâtel and Sheldon Duplaix, “Blue China,” pp. 1, 4.
101. Bruce-Lockhart, “China’s \$900 Billion New Silk Road.”
102. “Vision for Maritime Cooperation under the Belt and Road.”
103. “China Changes Gears on the Belt and Road Initiative,” *Stratfor*, 26 April 2019, worldview.stratfor.com/.
104. Nyshka Chandran, “China Can Make Its Belt and Road Project More Successful If It Taps Locals, Experts Say,” *CNBC*, 14 September 2018, cnbc.com/.
105. *China’s Maritime Silk Road Initiative* (statement of Jeffrey D. Becker, Research Program Director, Indo-Pacific Security Affairs, CNA), p. 49.
106. Marshall W. Meyer and Minyuan Zhao, “China’s Belt and Road Initiative: Why the Price Is Too High,” *Knowledge@Wharton*, 30 April 2019, knowledge.wharton.upenn.edu/.
107. Huong Le Thu, “China’s Aggression Is Starting to Backfire,” *Yahoo News*, 24 July 2018, yahoo.com/.
108. *China’s Maritime Silk Road Initiative* (Becker statement), p. 53.
109. Michael J. Green, “China’s Maritime Silk Road: Strategic and Economic Implications for the Indo-Pacific Region,” *CSIS*, 2 April 2018, www.csis.org/.
110. “China Changes Gears on the Belt and Road Initiative,” p. 2.
111. *China’s Maritime Silk Road Initiative* (Becker statement), p. 54.
112. Huong, “China’s Aggression Is Starting to Backfire.”
113. Stelios Bouras, “China COSCO to Buy Majority Stake in Greek Port for About \$400 Million,” *Wall Street Journal*, 20 January 2016, wsj.com/.
114. “Intelbrief: The EU’s Problematic Approach to China’s Belt and Road Initiative,” *Soufan Center*, 19 April 2019, thesoufancenter.org/.
115. *China’s Maritime Silk Road Initiative* (statement of Chad Sbragia, Deputy Assistant Secretary of Defense for China, Office of the Secretary of Defense), p. 13.
116. Wade Shepard, “China’s Seaport Shopping Spree: What China Is Winning by Buying Up the World’s Ports,” *Forbes*, 6 September 2017, forbes.com/.
117. Salem Soloman and Casey Frechette, “Corruption Is Wasting Chinese Money in Africa,” *FP*, 13 September 2018, foreignpolicy.com/.
118. Andrew Ward and Leslie Hook, “Iceland’s President Welcomes Chinese Interest,” *Financial Times*, 2 September 2011, ft.com/.
119. *China’s Maritime Silk Road Initiative* (Bartholomew statement), p. 21.
120. Elliot Kaufman, “Houston, We Have a China Problem,” *Wall Street Journal*, 7 October 2019, wsj.com/.
121. Michael Schuman, “Angering China Can Now Get You Fired,” *The Atlantic*, 27 August 2019, theatlantic.com/.
122. *China’s Maritime Silk Road Initiative* (Sbragia statement), p. 14.

123. Marc Santora, "A Courtship with China Ends Bitterly in Prague," *New York Times*, 24 November 2019, p. A6.
124. "Market Consolidation in Container Shipping: What Next?," *Hellenic Shipping News*, 10 June 2018, hellenicshippingnews.com/.
125. UNCTAD, *Review of Maritime Transport 2018*, pp. 32–33.
126. UNCTAD, "Market Consolidation in Container Shipping."
127. Ethan Huang, "The Impact of Shipping Consolidation and Alliances," *More than Shipping*, 25 November 2016, morethanshipping.com/.
128. Costas Paris, "A Storm Is Gathering over Container Shipping," *Wall Street Journal*, 3 March 2019, wsj.com/.
129. Jared Vineyard, "2 Big Problems Ocean Freight Shipping Faces in 2019," *Universal Cargo*, 31 January 2019, universalcargo.com/.
130. Mike Wackett, "Moody's Cuts Maersk's Credit Rating amid Fears for Box Shipping Sector," *gCaptain*, 10 December 2018, gcaptain.com/.
131. "Enforcement and Compliance," *International Trade Administration*, enforcement.trade.gov/.
132. *China's Maritime Silk Road Initiative* (Bartholomew statement), p. 25.
133. "China Leads in Global Shipbuilding Industry in 2017."
134. "Top 10 in Ship Finance 2018," *Lloyd's List*, 6 December 2018, lloydslist.maritimeintelligence.informa.com/.
135. Karen Roemer, "China's 2018 Global Shipping Ambitions Could Impact Supply Chains," *FreightWaves*, 3 January 2018, freightwaves.com/.
136. Franz-Stefan Gady, "China Prepares Its 172,000 Civilian Ships for War," *The Diplomat*, 23 June 2015, thediplomat.com/.
137. *China's Maritime Silk Road Initiative* (Sbragia statement), pp. 14–15.
138. *China's Maritime Silk Road Initiative* (Bartholomew statement), p. 24.
139. *Ibid.*; *China's Maritime Silk Road Initiative* (Becker statement), p. 49.
140. *China's Maritime Silk Road Initiative* (Becker statement), p. 53.
141. Michael Pillsbury, *The Hundred-Year Marathon: China's Secret Strategy to Replace America as the Global Superpower* (2015; New York: St. Martin's, 2016), p. 11 and passim.
142. Bruce-Lockhart, "China's \$900 Billion New Silk Road."