
EXPLAINING CHINA'S ARMS TRANSFERS

A range of factors determines the scope and scale of China's arms sales. As with any other commodity, China's arms sales are the result of a combination of supply-side and demand-side factors. The weapons' quality and price and purchasers' desire to improve political ties to Beijing are two primary drivers of demand. China's customers also often are seeking to diversify supply sources or, conversely, lack alternative supply sources. China's supply-side considerations include the desire to improve political ties with the recipient country, efforts to use the recipient state to balance against a strategic rival, and purely commercial considerations. No single determinant dominates either the demand or supply for weapons; which determinants are most prominent vary by the country involved. This chapter first examines China's major arms transfer relationships and then assesses the major determinants.

CHINA'S PRINCIPAL ARMS TRANSFER RELATIONSHIPS

Although China has transferred arms and weapons technology to nearly two dozen countries since 1980, arms transfers to six countries—Iran, Iraq, Pakistan, North Korea, Myanmar, and Thailand—are of particular significance. Sales to these countries are worthy of close examination because of the volume of weapons transferred, the nature of the recipient regime, and/or because the transfers involve missile systems or NBC weapons.¹

¹The information in this chapter is not a definitive documentation of the scope and scale of China's arms transfers or of the particulars of various sales. Rather, this chap-

Iran

China has had extensive military relations with Iran. Beijing has sold thousands of tanks, artillery pieces, and armored personnel carriers to Iran, more than 100 combat aircraft, and dozens of small warships. Beijing has also sold Iran an array of missile systems and technology, including air-to-air missiles, surface-to-air missiles, and antishipping cruise missiles. Most worrisome have been China's transfer of ballistic missile technology and its assistance with Iran's NBC programs. Cooperation in these areas continued at a robust pace until at least 1997. In September 1996, China and Iran signed a deal whereby China would provide combat aircraft, warships, a variety of armored vehicles, missile and electronic equipment, and military training to Iran.² In October 1997, however, China agreed to suspend or curtail transfers of NBC-related items as well as antishipping missile systems and technology.

China has provided a range of assistance to Iran's NBC programs:

- China has sent entire factories to Iran for producing chemicals that, although they have legitimate purposes, can also be used to make poison gas, and tons of industrial chemicals that could be used in making nerve agents.³
- State-owned firms in China provided supplies to Iran's chemical weapons program, including such dual-use items as chemical precursors, production equipment, and production technology.⁴ Non-state-owned firms may also have sold chemical-related

ter provides a detailed overview of China's most important arms transfer relationships for the purpose of analyzing the driving forces.

²Bates Gill, *Silkworms and Summitry: Chinese Arms Exports to Iran and U.S.-China Relations*, The Asia and Pacific Rim Institute of the American Jewish Committee, New York, 1997, p. 25.

³Gary Milhollin, testimony before the Senate Intelligence Committee, September 18, 1997.

⁴Kan, *China's Compliance with International Arms Control Agreements*, p. 1; U.S. Congress, Senate Governmental Affairs Subcommittee on International Security, Proliferation, and Federal Services, *China: Proliferation Case Studies*, Hearing on April 10, 1997, 105th Congress, Session 1, 1997, p. 8.

equipment, decontamination agents, and precursors to Iranian military organizations in 1996 and 1997.⁵

- U.S. intelligence reports leaked to the press indicate China may have sold Iran dual-use equipment and vaccines for biological weapons.⁶
- China has transferred nuclear technology and know-how to Iran's civilian nuclear programs, thus improving Tehran's ability to make nuclear weapons. China's assistance, all of which is technically acceptable under the International Atomic Energy Agency's (IAEA's) guidelines, has included help with uranium mining and enrichment, research reactors, production facility blueprints, and technical training. Beijing trained perhaps 15 Iranian nuclear engineers between 1988 and 1992.⁷ Chinese nuclear experts traveled to Iran in 1996 to help build a new uranium conversion plant.⁸
- China has provided a range of assistance to Iran's missile programs, and may have helped Iran build its large missile factory at Isfahan. China also helped build another plant and a test range near Tehran and is providing assistance guidance technologies and precision machine tools for Iran's indigenous programs.⁹ China helped Iran's Zelzal-3 (with 1000-km range) program with solid-fuel technology, gyroscopes, and guidance.¹⁰ In addition,

⁵Kan, *China's Compliance with International Arms Control Agreements*, pp. 10–11; Robert Karniol, "China Supplied Iran with Decontamination Agent," *Jane's Defense Weekly*, April 30, 1997, p. 17.

⁶U.S. Congress, Subcommittee on International Security, Proliferation, and Federal Services, *The Proliferation Primer*, Washington DC, 1998, p. 8.

⁷Gill, *Silkworms and Summitry*, pp. 12–13; Frank J. Gaffney, "China Arms the Rogues," *Middle East Quarterly*, September 1997, p. 34.

⁸China is also building a small nuclear reactor with Iran and a factory to encase fuel rods for reactors—projects U.S. officials claim are not important for proliferation—and promises no new nuclear cooperation with Iran. Kan, *China's Compliance with International Arms Control Agreements*, p. 9.

⁹Gill, *Silkworms and Summitry*, p. 11.

¹⁰Gill, *Silkworms and Summitry*, p. 12.

Chinese experts are reportedly working at Iranian missile production complexes.¹¹

As the above overview makes clear, China's transfers to Iran are not limited to complete systems. China has also transferred scientific expertise, technology, and dual-use items to Iran, as well as motors and test equipment for a short-range Iranian missile, the NP-110.¹² As a result of Beijing's assistance, Iran has developed variants of Chinese systems and now can produce several indigenously.¹³ Gauging the true extent of such transfers is difficult. Beijing has regularly denied that it has transferred weapons systems, particularly cruise missiles and NBC technology, and it is difficult to confirm the transfer of knowledge and production assistance.

China's cooperation with Iran appears to have diminished in recent years, partly because of U.S. pressure. In October 1997, China agreed not to provide new assistance to Iran's nuclear programs, and in January 1998, Secretary of Defense Cohen received an assurance from Chinese President Jiang Zemin that China would not transfer additional antiship cruise missiles or technology to Iran or help it with indigenous production.¹⁴

The commercial benefits of China's sales to Iran have been considerable, particularly during the Iran-Iraq war. China sold billions of dollars' worth of arms to Iran during the 1980s, and these sales provided Beijing with much-needed foreign currency. Since the end of the Iran-Iraq war, the volume of Beijing's sales to Iran has fallen considerably while China's overall trade has skyrocketed, but export earnings are still an important source of income for some of China's cash-strapped defense industries.

¹¹Shirley A. Kan, *Chinese Proliferation of Weapons of Mass Destruction: Current Policy Issues*, CRS Issue Brief, Congressional Research Service, Washington DC, March 23, 1998, p. 12.

¹²Bill Gertz, "Nuclear Sales to China Too Chancy, Foes Insist," *The Washington Times*, October 28, 1997, p. 1.

¹³Gill, *Silkworms and Summitry*, p. 22.

¹⁴Kan, *Chinese Proliferation of Weapons of Mass Destruction: Current Policy Issues*, p. 6.

China sells arms to Iran for foreign policy as well as commercial reasons. Until recently, China had a strong strategic and political interest in maintaining close ties with Iran. China's leaders considered Iran a bulwark against Soviet expansion in the region. Even today, Beijing appreciates Tehran's attempts to avoid aligning closely with Russia or the United States.¹⁵ And because most regional oil-producing states are close allies of the United States, Beijing seeks to ensure at least a modicum of influence in the region by maintaining good relations with Tehran.

Beijing also recognizes that preventing Iran from improving its military is a U.S. priority, and it may exploit U.S. sensitivity on this issue to attempt to influence U.S. policies in other areas. For example, after the United States announced it was selling F-16s to Taiwan, China revived a proposed transfer of M-11 missiles to Iran, which had earlier been canceled because of U.S. pressure.¹⁶ Ties to Iran thus provide Beijing with additional leverage in negotiations with the United States.

Chinese interest in maintaining the flow of oil has led Beijing to cultivate relations with Tehran, although this could change in the coming years. China's dependence on imported oil has grown steadily since 1994, and it is likely to continue to do so in the future. Thus, China seeks allies in key oil-producing regions, such as the Persian Gulf. In a crisis these countries are not likely to sell China oil on preferential terms, but Chinese analysts believe that maintaining good relations with leading oil-exporting nations such as Iran is important to China's future energy security.¹⁷ The United States, however, has attempted to convince Beijing that Iranian-backed instability threatens the free flow of oil from the Gulf, which could drive up the price of oil and jeopardize China's economic growth. U.S. officials claimed that China's promises at the October 1997 summit to

¹⁵Gill, *Silkworms and Summitry*, p. 7.

¹⁶Gill, *Silkworms and Summitry*, p. 21.

¹⁷Interviews conducted with the Institute of West Asian and African Studies, Chinese Academy of Social Sciences, June 1998.

cut nuclear cooperation with Iran occurred in large part because China recognized this danger.¹⁸

Iran, for its part, sees China as an important political partner and as a source of lethal weapons systems. China, with its UN seat and desire to reduce U.S. hegemony, was one of the few major powers willing to maintain strong and cordial relations with Tehran during the more radical days of the revolutionary regime. Perhaps more important, Tehran greatly appreciated Beijing's willingness to support Iran's missile and NBC programs. Moreover, because Iran, like China, seeks to avoid import dependence, Beijing is often a preferred partner—willing to transfer knowledge and expertise as well as critical subsystems. This has enabled Iran to produce its own variants of Chinese cruise and ballistic missile systems.

China, however, is not Iran's preferred partner for most conventional systems. After the Persian Gulf war, Tehran bought advanced submarines, fighter aircraft, tanks, and surface-to-air missiles from Russia: the Chinese systems, while cheaper, were clearly inferior, and the U.S. success in Desert Storm had shown the importance of advanced weaponry. Only after 1995, when Russia pledged that it would not make further arms contracts with Iran, did Tehran resume looking to China for conventional arms.

In recent years, China's relations with Iran appear to have cooled and the transfer of arms has fallen in turn. The ending of the Iran-Iraq war and the low price of oil mean that Iran no longer has the need or the ability to buy large quantities of Chinese arms. U.S. sanctions and economic mismanagement have caused grave economic problems for the Islamic republic, forcing it to reduce its defense budget. In addition, Iranian military officials probably have little faith in the quality of Chinese weapons: during the Iran-Iraq war, they sought to avoid using Chinese systems whenever possible during major battles. At the same time, the collapse of the Soviet Union means that more sophisticated Russian weapons are now available at equally low prices.

¹⁸"A New China Embracing Nuclear Nonproliferation," *International Herald Tribune*, December 11, 1997, p. 1.

For its part, China no longer sees Iran as a vital bulwark against Soviet expansion. Indeed, China often cooperates with Russia against the West. U.S. pressure and China's desire to be seen as a responsible power make Iran a potentially costly friend for Beijing. U.S. pressure played a major role in Beijing's October 1997 decision to curtail military cooperation with Iran.

Iraq

From 1983 to 1989, Baghdad received over \$5 billion worth of arms from China,¹⁹ including an array of conventional systems ranging from tanks to fighter aircraft. Despite their limited sophistication, Chinese weapons proved relatively easy for the poorly trained Iraqi forces to use.

Beijing has adhered to the 1990 UN sanctions on Iraq, but arms sales may well resume if sanctions are lifted. If sanctions end, China will almost certainly seek to increase cooperation with Baghdad regarding oil and may renew military cooperation in return.²⁰ A top priority under Saddam or any likely successor government will be to rebuild Iraq's military. Moreover, Iraq may not trust the few Western states, such as France, that are likely to sell it arms. Like Iran, Iraq also seeks to produce its own weapons systems and thus will welcome Chinese transfers of knowledge and production assistance. As a result, China—along with Russia—could be faced with a wealthy customer eager to make major purchases. Such sales would pose a threat to U.S. interests, as Iraq remains unremittingly hostile to U.S. allies in the region and is pursuing NBC programs.

Relations with Iraq follow the same logic as relations with Iran. Iraq's immense oil reserves—by some estimates 10 percent of the world's total known assets—increase its attractiveness to Beijing. Just as China has sought good relations with Iran because of its oil assets, so too will it seek close, or at least cordial, relations with Baghdad, if possible. Iraq's hostility toward the West also has some

¹⁹Anthony H. Cordesman and Ahmed S. Hashim, *Iraq: Sanctions and Beyond*, Westview, Boulder, CO, 1997, p. 227.

²⁰Interviews conducted at the Institute of Eurasian Studies, Shanghai Academy of Social Sciences, May 1998.

strategic attraction for Beijing, offering another potential ally in this U.S.-dominated region.

Pakistan

Pakistan has been China's most significant recipient of weapons and military technology. Islamabad is at least a nominal ally of Washington, and thus conventional arms sold to Pakistan should pose little threat. However, the repeated transfer of NBC technology and associated delivery systems make this relationship of particular concern to the United States. China has sold or even given Pakistan Type-59 tanks, Type-531 armored personnel carriers, missile boats, F-7P jet fighters, and M-11 missiles among other systems.²¹ China has also provided Pakistan with facilities to produce an array of conventional systems including jet trainers, the Type-69 tank, the HJ-8 antitank missile, and the HN-5A portable surface-to-air missile.²²

In addition, China has been willing to incur the wrath of the United States to help Pakistan's missile and NBC programs even though the financial reward is limited:

- Beijing played a major role in Pakistan's nuclear program. In the 1980s, China reportedly provided Pakistan with a proven nuclear weapon design and enough highly enriched uranium for two weapons.²³ A high level of cooperation has continued in the 1990s. In 1994 or 1995, a Chinese government-owned subsidiary transferred 5000 ring magnets, which are used in centrifuges to enrich uranium, to unsafeguarded facilities in Pakistan, a shipment worth \$70,000 that violated China's NPT obligations in the opinion of Administration officials and outside experts.²⁴ At

²¹Eric Hyer, "China's Arms Merchants: Profits in Command," *The China Quarterly*, No. 132, December 1992, p. 1105.

²²Eikenberry, *Explaining and Influencing Chinese Arms Transfers*, pp. 5–15.

²³Gary Milhollin, testimony before the Senate Intelligence Committee, September 18, 1997.

²⁴See testimony of Gary Milhollin, U.S. Congress, Senate Governmental Affairs Subcommittee on International Security, Proliferation, and Federal Services, *China: Proliferation Case Studies*, Hearing on April 19, 1997, 105th Congress, Session 1, 1997, p. 31; and the testimony of Under Secretary of State Lynn Davis, U.S. Congress, House

about the same time, China also sold Pakistan dual-use technology—diagnostic equipment and an industrial furnace—that can be used for nuclear weapons.²⁵

- China has also played an active role in Pakistan's missile program. For example, in November 1992 China transferred M-11 short-range ballistic missile components to Pakistan, and in August 1993 China shipped additional equipment related to the M-11 missiles. Intelligence reports leaked to the media indicate China sent missile parts to Pakistan in 1995.²⁶ Pakistan is developing the Ghauri, a 1500-km-range ballistic missile, probably with Chinese assistance. China may also have provided blueprints and equipment to Pakistan for manufacturing M-11 missile components and perhaps whole missiles.²⁷

Pakistan was a particularly important ally for China during the Cold War, representing a bulwark against Soviet expansion in Afghanistan and a staunch foe of Moscow in general. The two countries worked together with the United States to arm the Afghan *mujahedin* and to prevent Soviet expansion. Now that the Soviet threat is gone, the greatest strategic benefit to both countries is to offset Indian military power. Both China and Pakistan have fought wars with India, and India has supported Tibetan dissidents against Beijing. The May 1998 Indian nuclear tests were ostensibly directed against China, increasing Beijing's shared strategic concerns with Islamabad. China's arms sales and military cooperation in general with Pakistan increase Beijing's military leverage over New Delhi. By strengthening Pakistan's military capabilities, China forces India to devote more resources to its border with Pakistan and less to its border with China.²⁸

International Relations Committee Hearing, *Review of the Clinton Administration Nonproliferation Policy*, 104th Congress, 2nd Session, June 19, 1995, p. 15.

²⁵Bill Gertz, "Beijing Flouts Nuke-Sales Ban," *Washington Times*, October 9, 1996, p. A1.

²⁶Kan, *China's Compliance with International Arms Control Agreements*, p. 3.

²⁷R. Jeffrey Smith, "China Linked to Pakistani Missile Plant: Secret Project Could Renew Sanctions Issue," *Washington Post*, August 25, 1996, p. A1.

²⁸Robert E. Mullins, "The Dynamics of Chinese Missile Proliferation," *The Pacific Review*, Vol. 8, No. 1, 1995, p. 142.

Ties to Pakistan enhance Beijing's strategic and political reach. Karachi is a regular refueling point for Chinese aircraft flying to Europe, Africa, and the Middle East, and Pakistan acts as a go-between for China and various Islamic countries, helping facilitate China's relations with Iran, Saudi Arabia, and other Muslim nations.²⁹

On the other hand, Pakistan also has close ties with the Muslim movements in Afghanistan, a potential pitfall in China's relationship with Pakistan. Pakistan has funded, armed, and organized the Taliban, the dominant faction in Afghanistan. The Taliban, in turn, have probably aided Muslim radicals operating in China itself, including Uighur separatists and other violent groups in Xinjiang. Surprisingly, these ties have so far not affected Pakistan's close ties to China. Continued Afghan aid to activists in China, however, could affect Beijing's relations with Islamabad.

Islamabad, for its part, increasingly needs Beijing as a strategic ally. Western nations, particularly the United States, have distanced themselves from Pakistan because of its nuclear program. Other countries, such as Russia, may be hesitant to jeopardize lucrative ties to India in order to improve relations with Pakistan. Thus, China is the only major arms supplier willing to work with Islamabad consistently.

Arms sales to Pakistan are thus likely to remain steady in the coming years. Pakistan is one of Beijing's few close allies, and the two countries' mutual fear of India will keep military relations on track. Pakistan's economy, however, has stagnated in recent years, which will make it difficult for Islamabad to increase purchases of Chinese equipment. Anger over Pakistan's support for the Taliban could also lead Beijing to restrict its arms sales to Pakistan.

North Korea

North Korea has been one of China's steady arms customers over the years and transfers continued into the early 1990s. Although the volume has not been enormous, it is significant because North Korea

²⁹*Ibid.*

continues to threaten the forces of the United States and its South Korean ally. Transfers since 1980 have included Romeo-class submarines, F-6 fighters, HY-2 ("Silkworm") antishipping missiles, HN-5A man-portable surface-to-air missiles, and multiple launch rocket systems.³⁰

Beijing's motivations for arms transfers to North Korea primarily have been strategic. China and North Korea became allies during the Korean War in 1950, and in the 1950s Chinese officials described the relationship between the two socialist countries as being "as close as lips and teeth." After the Sino-Soviet break in 1960, Beijing had an even stronger interest in maintaining good relations with Pyongyang—a North Korea that tilted toward the Soviet Union would have presented a serious security problem for China. With the launching of China's economic reform program in the late 1970s, China's leaders stressed the importance of a peaceful international environment for China's economic development. China's leadership thus had a renewed interest in maintaining its influence in Pyongyang to dissuade North Korean leaders from provoking a conflict with South Korea, even as concerns about Soviet encirclement faded in the late 1980s.

Arms sales have been one way of ensuring this influence.³¹ Although no new arms deals between China and North Korea have apparently been concluded since the late 1980s, this may be a result of Pyongyang's inability to pay for additional armaments rather than Beijing's unwillingness to continue to supply arms to North Korea.³² As two of the few remaining socialist countries, relations between China and North Korea have remained cordial in the 1990s, despite Beijing's recognition of Seoul in 1992. China now maintains its goodwill in Pyongyang through the shipments of food and energy supplies it provides. Given Beijing's desire to avoid hostilities (or economic collapse) on the Korean peninsula, these supplies are probably viewed as a more prudent way to cultivate relations with

³⁰Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions, Oxford University Press, Oxford, New York, 1983–1997.

³¹It is unclear whether these were provided at market or "friendship" prices.

³²Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions; Tai Ming Cheung, "Proliferation Is Good, and There's Money in It Too," *Far Eastern Economic Review*, June 2, 1988, p. 26.

Pyongyang than through free or subsidized arms shipments.³³ Thus, it seems unlikely that China will conduct significant further weapons sales with North Korea, at least until North Korea acquires the ability to pay for them in hard currency at market prices.

North Korea has purchased Chinese weapons primarily because China and the Soviet bloc have been the two sources available to it. Pyongyang presumably felt solidarity with its fellow socialist countries, but limiting its purchases to China and the Soviet bloc also was out of necessity. Most Western nations would have refused to sell weapons to the violent and hostile North Korean regime. Although the majority of North Korea's arms in the 1980s and 1990s were from Russia, probably because Soviet arms sales were made at subsidized rates, the North Korean leadership has attempted to play Beijing and Moscow off against each other to maximize its leverage with both. This explains why Pyongyang purchased Chinese weapons as well.³⁴

The collapse of the Soviet Union has meant the end of Soviet subsidies to North Korea, reducing China's imperative for good relations with Pyongyang. Pyongyang has signed virtually no new weapons agreements with any country since the late 1980s, although in the early 1990s it continued to receive deliveries of Russian and Chinese systems for which it had previously contracted.³⁵ Chinese arms sales to North Korea totaled over \$1 billion in the 1980s but amounted to less than \$50 million in the first half of the 1990s.³⁶ Although Pyongyang will probably prefer to purchase Chinese and Russian systems in the future because of their compatibility with its existing inventory, its desperate economic straits and lack of foreign exchange leave it unable to pay for these weapons.

³³Interviews at Institute of Asia-Pacific Studies, Shanghai Academy of Social Sciences, May 1998; at China Institute for International Studies, June 1998; and at China Institute for Contemporary International Relations, June 1998.

³⁴Gill, *Chinese Arms Transfers*, p. 192.

³⁵Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions.

³⁶Bates Gill, "Chinese Military Modernization and Arms Proliferation in the Asia-Pacific," in Jonathan D. Pollack and Richard H. Yang (eds.), *In China's Shadow: Regional Perspectives on Chinese Foreign Policy and Military Development*, RAND, 1998, p. 25.

Myanmar

Myanmar has only recently become one of China's arms clients, with shipments of Type-62 and Type-63 light tanks beginning in 1989. Since that time, Myanmar has become an important customer for Chinese conventional weapons. Systems supplied to Myanmar include Type-69 main battle tanks, F-6 and F-7 fighter jets, A-5 attack aircraft, PL-2 air-to-air missiles, HN-5A portable surface-to-air missiles, Hainan-class patrol craft, multiple rocket launchers, Y-8 and Y-12 transport aircraft, and fire control radars.³⁷

China has several interests in Myanmar. First, China's arms sales to Myanmar—like its sales to Pakistan—complicate the security planning of China's strategic rival, India.³⁸ The effort appears to be successful—Indian leaders and analysts have complained about Chinese encirclement.³⁹ In addition, China has apparently received access to Myanmar's Indian Ocean naval bases, including a radar installation on the Coco islands that is close to India's naval base in the adjoining Andaman Islands, in return for arms shipments and technical assistance to Myanmar's navy.⁴⁰ India and the Indian Ocean are said to be China's third greatest strategic concern after Taiwan and the South China Sea,⁴¹ so China would appear to have a strong interest in continuing access to Myanmar's naval facilities.

Aside from its rivalry with India, Beijing has other reasons for wishing to maintain good relations with Yangon. First, China's commercial interests in Myanmar have been growing rapidly. Although China's

³⁷Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions; Gill, "Chinese Military Modernization," p. 25.

³⁸Interview at Institute of Asia-Pacific Studies, Shanghai Academy of Social Sciences, May 1998.

³⁹"A militarized, China-supported Burma to the east is the last thing India needs at the moment" according to an Indian security official. Bertil Lintner, ". . . But Stay on Guard," *Far Eastern Economic Review*, July 16, 1998, p. 21.

⁴⁰Karl W. Eikenberry, *Explaining and Influencing Chinese Arms Transfers*, p. 22; Bertil Lintner, "Arms for Eyes," *Far Eastern Economic Review*, December 16, 1993, p. 26; Bertil Lintner, "Burma Road," *Far Eastern Economic Review*, November 6, 1997, pp. 16–17; Lintner, ". . . But Stay on Guard," p. 21.

⁴¹Tai Ming Cheung, Hong Kong-based military analyst, quoted in Lintner, ". . . But Stay on Guard," p. 21.

trade with Myanmar has been less than \$1 billion a year,⁴² its greater significance is Myanmar's outlet for China's backward southwestern provinces. Also, mainland Chinese are heavily involved in commerce within Myanmar, and Beijing may wish to maintain good relations with Yangon to ensure that their interests are protected.⁴³ In addition, Beijing seeks influence over Yangon to limit drug smuggling from Myanmar into China. Finally, as a fellow authoritarian state in a democratizing world, Myanmar can provide political support to China in its efforts to delegitimize criticism of human rights records as interference in states' internal political affairs. Given this combination of strategic, economic, and political interests, China is likely to remain eager to sell arms to Myanmar, quite possibly at subsidized rates, for the foreseeable future.

As with North Korea, the closed nature of Myanmar's political system means that information about Myanmar motivations in acquiring Chinese arms is scarce. Up until 1988, Yangon's purchases of foreign-made weapons had consisted primarily of training aircraft and transports.⁴⁴ After 1988, however, the Myanmar government suddenly began building up its armed forces. This may have been to placate the powerful armed forces or because of a perceived threat from India after Yangon's crushing of a pro-democracy uprising (which had Indian sympathy) in 1988. In any case, Myanmar began receiving major shipments of Chinese weapons beginning in 1989.⁴⁵

Myanmar chose China as its arms supplier for both political reasons and out of necessity. After the Myanmar government's crackdown on pro-democracy demonstrators, most Western countries were unwilling to supply the ruling regime with weapons.⁴⁶ Moscow's close relations with New Delhi meant that Russian arms were unavailable, although Russia's increasingly dire economic straits are

⁴²International Monetary Fund, *Direction of Trade Statistics*, March 1998, p. 52.

⁴³Bertil Lintner, "Rangoon's Rubicon," *Far Eastern Economic Review*, February 11, 1993, p. 28.

⁴⁴Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions.

⁴⁵"Allies in Isolation: Burma and China Move Closer," *Jane's Defence Weekly*, September 15, 1990, p. 475.

⁴⁶In 1991, the European Union banned arms sales to Myanmar. Godemont, "China's Arms Sales," p. 106.

likely to reduce any strategic inhibitions. Myanmar leaders probably also wanted to establish a closer relationship with Beijing to balance the perceived threat from India, because purchasing arms from China gave the impression of Chinese protection of Myanmar.⁴⁷ Finally, significantly increased commercial interactions with China since the mid-1980s may have led Yangon to desire improved ties with Beijing.

The most important reasons Myanmar seeks Chinese arms, however, may be that the arms are provided at below-market prices⁴⁸ and that they are associated with a broader program of technical and infrastructure assistance from China.⁴⁹ In the 1980s, China simply gave some arms to Thailand or else sold them at nominal prices, for geostrategic reasons. It seems plausible that China has been making similar subsidized sales to Myanmar in the 1990s.

Thailand

Thailand received significant amounts of conventional weapons from China in the late 1980s and early 1990s. Many of the weapons were provided as gifts or at extremely low prices. Systems transferred included Type-59 and Type-69 main battle tanks, 130-mm towed artillery, armored personnel carriers, multiple launch rocket systems, HQ-2B and HN-5A surface-to-air missiles, Jianghu-class frigates, and C-801 antishipping missiles.⁵⁰

China's arms transfers to Thailand had two strategic purposes. First, Beijing sought to counter Vietnamese, and by extension Soviet, influ-

⁴⁷“One of the attractions of close relations with China from the standpoint of India's smaller neighbors has been their belief that those relations would restrain India and/or mitigate the effects of Indian pressures.” John W. Garver, “China-India Rivalry in Nepal: The Clash Over Chinese Arms Sales,” *Asian Survey*, Vol. 31, No. 10, October 1991, p. 974.

⁴⁸Bitzinger, “Arms to Go,” p. 87.

⁴⁹Chinese radar specialists, engineers, and naval-operations officers have all reportedly been seen at various naval facilities in Myanmar. See Bertil Lintner, “Arms for Eyes,” p. 26; Bertil Lintner, “. . . But Stay on Guard,” p. 21.

⁵⁰Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions.

ence in Southeast Asia.⁵¹ Although the first arms transfers to Thailand did not occur until 1985, Beijing began making overtures to Bangkok almost immediately after Vietnam's 1978 invasion of Cambodia.⁵² Transferring arms to Thailand not only strengthened that country against Vietnamese intimidation, it also served as visible evidence of China's commitment to Thailand's security, adding credibility to Beijing's intimations that it would come to Bangkok's aid in the event of a Vietnamese incursion. Second, and more broadly, China's arms transfers to Thailand bolstered Beijing's political influence in Southeast Asia, giving it a role in determining Cambodia's political future and facilitating the reestablishment of diplomatic relations between China and Indonesia in 1990.⁵³

For its part, Thailand appears to have had several motivations for purchasing Chinese arms in the 1980s. One was geostrategic. With Vietnamese forces on Thailand's border, developing close ties to Beijing helped deter Vietnam from considering attacks on Thailand at a time when Thailand was providing support and sanctuary for the Khmer Rouge forces Vietnam was fighting.⁵⁴ Beijing also offered an alternative source for weapon systems, especially when Washington began to reduce military aid to Thailand after 1986.⁵⁵ A final reason was the extremely low cost of the Chinese equipment. In 1985, China provided Thailand with artillery and tanks as outright gifts, followed by transfers of equipment at prices only a fraction of actual value, with generous repayment terms.⁵⁶

⁵¹Interview at Institute of Asia-Pacific Studies, Shanghai Academy of Social Sciences, May 1998.

⁵²R. Bates Gill, "China Looks to Thailand: Exporting Arms, Exporting Influence," *Asian Survey*, Vol. 31, No. 6, June 1991, p. 528.

⁵³Paisal Sricharatchanya, "'Friendship' Arms Sales," *Far Eastern Economic Review*, March 19, 1987, p. 15; Gill, "China Looks to Thailand," p. 536.

⁵⁴Rodney Tasker, "Order Arms," *Far Eastern Economic Review*, October 4, 1990, p. 20; Gill, "China Looks to Thailand," pp. 527–528, 538.

⁵⁵Leszek Buszynski, "New Aspirations and Old Constraints in Thailand's Military Policy," *Asian Survey*, Vol. 29, No. 11, November 1989, p. 1069; Paisal Sricharatchanya, "The Chinese Firecracker," *Far Eastern Economic Review*, December 8, 1988, p. 34.

⁵⁶Gill, "China Looks to Thailand," p. 529; Eden Y. Woon, "Chinese Arms Sales and U.S.-China Military Relations," *Asian Survey*, Vol. 29, No. 6, June 1989, p. 606; Bitzinger, "Arms to Go," p. 87.

The systems delivered in the 1990s were the result of agreements signed in the late 1980s,⁵⁷ and it seems unlikely that Thailand will acquire significant numbers of Chinese weapons in the foreseeable future. Vietnam's withdrawal from Cambodia reduced Thailand's need for a close military relationship with China to deter Vietnam, and Thailand has been dissatisfied with the quality of the Chinese arms it has received. In contrast, the United States has been offering some of its most advanced systems to Thailand.⁵⁸ Indeed, the United States agreed to include AMRAAMs (Advanced Medium-Range Air-to-Air Missiles) with F/A-18 fighters it offered in 1997.⁵⁹ Finally, Thailand's current financial difficulties will limit its ability to acquire weapons from any country for the next few years.

Thailand's dwindling interest in Chinese arms is reinforced by a decline in interest from Beijing. With the collapse of the Soviet Union and Vietnam's withdrawal from Cambodia, China's strategic interest in supporting Thailand against Vietnam has diminished sharply. Relations with Vietnam have improved markedly and, although Hanoi and Beijing remain suspicious of each other, Vietnam is no longer Beijing's open adversary. Thailand and China no longer need to cooperate in supporting the Cambodian resistance, and Beijing has succeeded in establishing good relations with the Cambodian government. Consequently, the strategic motivation for China's arms sales to Thailand has disappeared and China is unlikely to subsidize further arms sales to that country. Coupled with the Thai dissatisfaction with the arms they have received, this means that future Chinese arms transfers to Thailand are likely to be minimal.

RECIPIENT COUNTRY DEMAND

A great attraction of China's arms has been their price. For example, in 1992 the open-market cost of a Russian MiG-29 was \$25 million; the Chinese F-7M sold for \$4.5 million at most.⁶⁰ Although the F-7M

⁵⁷Stockholm International Peace Research Institute, *SIPRI Yearbook*, 1983–1997 editions. The exception is one Similan-class support ship contracted for in 1993.

⁵⁸Tasker, "Order Arms," p. 20.

⁵⁹R. Bates Gill, "Curbing Beijing's Arms Sales," *Orbis*, Summer 1992, p. 384; Rodney Tasker, "Order Arms," p. 20.

⁶⁰Eikenberry, *Explaining and Influencing Chinese Arms Transfers*, p. 34.

is clearly an inferior aircraft, some countries may seek to make up in volume what they lack in quality. Poor countries can more easily build up large militaries using Chinese weapons. Some states have combined small numbers of sophisticated Western systems with large numbers of Chinese systems.⁶¹

In addition to being inexpensive, Chinese weapons are simple to operate and maintain, a key factor for countries where military professionalism is limited and the technological base is low.⁶² The major customers described above are developing countries. The maintenance skills of Iraq, Myanmar, and Pakistan are particularly poor, preventing them from operating Western systems to their full advantage.

Chinese weapons have the additional advantage of being similar to Soviet systems, which form the basis of many developing countries' arsenals. The F-7, for example, is a reverse-engineered MiG-21, and the Type-59 tank is based on the T-54. Countries that are able to operate and maintain older Soviet systems thus are likely to be able to do so with Chinese systems, and many parts and supplies may be interchangeable.

China has also been the only available source of arms for some pariah states, such as Iran and Myanmar, and for certain types of weapons technology for other countries, particularly Pakistan.⁶³ More generally, Chinese systems allow customers to avoid dependence on the United States and the West and carry few if any political strings.⁶⁴ Beijing is often willing to sell arms to countries when Western nations are not.⁶⁵ Thus, Saudi Arabia, which faced limits (in the type of systems available and in the systems' use) in sales from the United States because of objections from Israel, bought ballistic missiles from China.⁶⁶

⁶¹Bitzinger, "Arms to Go," p. 92.

⁶²Daniel Sneider, "China's Arms Bazaar," *Far Eastern Economic Review*, December 18, 1986, p. 23.

⁶³Godemont, "China's Arms Sales," p. 98.

⁶⁴Bitzinger, "Arms to Go," p. 91.

⁶⁵Bitzinger, "Arms to Go," p. 92.

⁶⁶Hyer, "China's Arms Merchants," p. 1106.

In some cases, China has been willing to transfer subsystems and expertise, which is important to countries that wish to build up their own defense industries. Iran, Iraq, Pakistan, and North Korea all benefited from Chinese assistance in developing their own weapons systems.

Several countries have purchased Chinese arms in an attempt to improve political ties to Beijing. Thailand sought Chinese arms in part to gain the imprimatur of Beijing's protection—in effect, conveying the impression to Vietnam that China stood by Bangkok. Myanmar may have taken a similar course beginning in 1989, using its arms relationship with Beijing to send a message to New Delhi.

Despite these attractions, the demand for most Chinese conventional weapons is limited and shrinking. In general, Chinese arms are not sophisticated—the vast majority are clones of old Soviet designs from the 1950s and 1960s—and are of poor quality. The initial Romeo-class submarines China sold to Egypt in 1984 arrived with worn-out engines. Ships sold to the Thai navy had doors that were not watertight and basic mechanical problems.⁶⁷ Customers have complained that tank fire-control systems and guns are not stabilized, that the engine quality is poor, and that the steel quality is uncertain.⁶⁸ In the Iran-Iraq war, both sides avoided using Chinese systems when possible, relying instead on Western or Soviet systems.⁶⁹ Such poor craftsmanship has hurt sales. Customers seeking more sophisticated capabilities will prefer to work with the West or Russia.

Competition has increased since the collapse of the Soviet Union. The price of Russian weapons has plunged, and many states of the former Soviet Union and Eastern Europe are selling their equipment at bargain basement prices. Iran, which was often dissatisfied with Chinese arms, believes Russian ones, suddenly cheaper, provide a

⁶⁷Norman Friedman, "Chinese Military Capacity: Industrial and Operational Weaknesses," in *Military Capacity and the Risk of War: China, India, Pakistan, and Iran*, Eric Arnett (ed.), Oxford University Press, New York, 1997, pp. 71–72.

⁶⁸Bitzinger, "Arms to Go," p. 90.

⁶⁹Bitzinger, "Arms to Go," p. 91.

better alternative.⁷⁰ As restraints on Russian sales have fallen, developing countries have turned to Moscow for weapons.

Demand for Chinese weapons has also fallen because some of China's best customers are experiencing economic difficulties and thus are unable to purchase more advanced Chinese systems. China has claimed, for example, that Iran's inability to pay led it to stop nuclear cooperation.⁷¹ North Korea has gone from a poor country to an international basket case, reducing its ability to buy any arms. Pakistan's economy has stagnated in recent years, and Myanmar, already one of the poorer countries in Southeast Asia, may be headed for economic collapse.⁷²

However, the demand for Chinese weapons could expand. If sanctions are lifted on Iraq, Baghdad may again become a major customer for Beijing. Many of China's transfers have been to one of the most unstable regions of the world—the arc stretching from Pakistan to Egypt. This region is plagued by border disputes, civil wars, and instability in general. The stability of this region will be closely linked to the market for Chinese arms. If turmoil increases, so too will the market for weapons; if stability grows, the demand for arms will shrink. Finally, if China's production capabilities improve, it may find new buyers for its weapons. If China's weapons quality begins to approach that of Russia and the West, its market share will likely increase.

BEIJING'S INCENTIVES

The factors influencing China's arms sales are complex and are not motivated primarily by purely commercial considerations. In almost all cases, a clear political or strategic interest can be associated with China's arms sales to each of its major customers, as demonstrated by the fact that many sales were made at subsidized "friendship" prices. Conversely, in some cases sales have been restricted by polit-

⁷⁰Robert Karniol, "China's \$4.5b Deal with Iran Cools as Funds Fail," *Jane's Defense Weekly*, August 6, 1997, p. 14.

⁷¹Kan, *China's Compliance with International Arms Control Agreements*, p. 9.

⁷²Shawn W. Crispin, "Heading for a Fall," *Far Eastern Economic Review*, August 27, 1998, p. 56.

ical considerations. Beijing appears to have begun to appreciate the risks of proliferation and wishes to improve its international standing by increasing its commitment to nonproliferation.

This is not to discount commercial motivations in China's arms transfers where Beijing's political interests are limited. For example, the Middle East is far from China and Beijing's interests are primarily economic.⁷³ However, given the strategic benefits of many sales—and the political costs in terms of damaged relations with the United States—it seems clear that China's arms sales are motivated by strategic and political, not merely commercial, considerations.⁷⁴

China's Foreign Policy Interests

Arms sales serve a wide array of Chinese foreign policy purposes.⁷⁵ In many cases, China uses arms transfers to strengthen countries against states that are Beijing's rivals. The transfer of arms to Thailand, Myanmar, and Pakistan strengthened allies against the Soviet Union, Vietnam, and India, respectively. This follows a long-standing pattern dating back to the Sino-Soviet split, when China began selling arms to rivals of Moscow's proxies in the third world.⁷⁶ Arms transfers also increase Beijing's strategic reach. For example, China may have supplied Myanmar with advanced radar equipment and other assistance in exchange for access to bases in the Indian Ocean.⁷⁷

China also transfers arms to improve relations with particular countries or regions. Strong ties to Pakistan, for example, facilitate China's relations with countries in the Middle East, giving China influence in this strategically vital region. Similarly, China's transfers of arms to Thailand in the 1980s increased China's influence in Southeast Asia. In some cases, specific political goals may be sought.

⁷³Authors' interviews at the Institute of West Asian and African Studies, Chinese Academy of Social Sciences, June 1998.

⁷⁴Gill, "Curbing Beijing's Arms Sales," pp. 391–392; Godemont, "China's Arms Sales," pp. 107–108.

⁷⁵Woon, "Chinese Arms Sales," pp. 609–611.

⁷⁶Eikenberry, *Explaining and Influencing Chinese Arms Transfers*, p. 6.

⁷⁷Bertil Lintner, ". . . But Stay on Guard," p. 21.

China's 1987 sale of intermediate-range missiles to Saudi Arabia, for example, apparently contributed to an effort to convince Saudi Arabia to switch recognition from Taipei to Beijing, which Riyadh did in 1990.⁷⁸ China may even use the threat of sales to U.S. adversaries as a bargaining chip in its efforts to limit U.S. arms sales to Taiwan.⁷⁹

Given China's growing dependence on imported oil, Chinese analysts have emphasized the importance of maintaining good relations with oil-exporting nations, which may partly explain China's close relations with Iran and its willingness to support the end of Baghdad's isolation.⁸⁰ Beijing may hope that these countries will sell China oil on preferential terms or, equally important, will not deny China oil should other oil-producing states, most of which are staunch U.S. allies, embargo China. Such a hope is probably misguided. The world's oil market is advanced, and as many consumers discovered in the 1970s, preferential agreements mean little in the event of a price shock. Nevertheless, even if China's motivations are mistaken, they do shape its arms sales behavior.

Commercial Motivations for Arms Transfers

China's arms sales reflect purely commercial interests along with its foreign policy objectives. At the most basic level, these interests stem largely from China's economic reform program and a decision at the end of the 1970s to reduce the resources being channeled to China's military and defense industries. To compensate for decreased revenues, China's leaders encouraged the defense industries to convert to production of civilian goods and to export both military and civilian products. China's military was encouraged to set up commercial enterprises as a way of generating additional revenues.⁸¹ Although

⁷⁸Geoffrey Kemp, *The Control of the Middle East Arms Race*, Carnegie Endowment for International Peace, Washington, 1991, p. 62.

⁷⁹Gill, *Silkworms and Summitry*, p. 21.

⁸⁰Interview at Institute of West Asian and African Studies, Chinese Academy of Social Sciences.

⁸¹See Eric Arnett, "Military Technology: The Case of China," in Stockholm International Peace Research Institute, *SIPRI Yearbook 1995*, pp. 362–363; James Mulvenon, *Soldiers of Fortune*, Ph.D. Dissertation, University of California at Los Angeles, 1998.

most of the enterprises were not involved in arms production or sales, one People's Liberation Army (PLA)-owned company, Poly Technologies, was heavily engaged in the sale of weapon systems from the PLA inventory (in some cases Poly filled orders by requisitioning newly produced systems that were provided to the PLA at state-subsidized prices and then immediately selling them abroad at international market prices). Selling weapons abroad became an important revenue source for many defense and military organizations.⁸²

In addition to providing new sources of revenue for China's military and defense industries, foreign arms sales have provided several other economic benefits to China. During the 1980s, weapons sales constituted a significant source of foreign exchange earnings for China.⁸³ From 1984 to 1987, when China's arms sales peaked, arms sales produced an estimated \$8.2 billion in hard currency for China, equal to about 7 percent of China's total exports during those years. Deng Xiaoping reportedly dismissed the Ministry of Foreign Affairs criticism of the missile sale to Saudi Arabia by asking the leadership of the exporting corporation, "How much money did you make?"⁸⁴ The contribution of arms sales to China's total foreign exchange earnings has diminished sharply since that time, however; China's civilian exports have boomed while arms sales have tapered off since the end of the Iran-Iraq war.⁸⁵ The value of arms sales in 1996 represented less than 1 percent of China's total exports in that year.⁸⁶ China now has over \$140 billion in foreign exchange reserves,⁸⁷ and it can no longer be argued that China needs to sell weapons to raise hard currency.

⁸²Hyer, "China's Arms Merchants," p. 1109.

⁸³Woon, "Chinese Arms Sales," pp. 607–608.

⁸⁴As quoted in Hyer, "China's Arms Merchants," p. 1106.

⁸⁵China sold over \$10 billion in arms to Iran and Iraq throughout the 1980s, fueling the war between the two powers. Hyer, "China's Arms Merchants," p. 1104.

⁸⁶Stockholm International Peace Research Institute, *1997 SIPRI Yearbook*, p. 268; International Monetary Fund, *Direction of Trade Statistics*, March 1998, p. 52.

⁸⁷See for example, "Prices and Trends," *Far Eastern Economic Review*, August 27, 1998, p. 66.

The foreign exchange earned by weapon sales remains significant to China's defense industries and military, however, because they are allowed to retain part of the earnings (another portion goes to the Ministry of Finance).⁸⁸ The PLA's purchases of major imported weapon systems such as Russian Su-27s are reportedly funded by allocations from the central government, so the military's ability to import advanced weapons is not dependent on the hard currency it acquires through its arms sales. However, the foreign exchange generated through these sales may be used to fund the purchases of other scarce imported items.

China's military has other reasons to encourage, or at least to allow, weapons exports. Because much of the cost of producing a weapon system is in the research and development phases, the larger the number of units of a system actually produced, the lower the per-unit cost. In other words, by exporting weapons that are also developed for domestic use, China is effectively using foreigners to help finance its indigenous research and development efforts.⁸⁹ In addition, participation in international markets provides a stimulus for technological progress and improvement in the capabilities of China's weapons, since if the systems produced are not competitive, they will not succeed in generating export sales. Also, China may have sold parts of its stockpiles of obsolete weapons. These weapons, intended to defend China's border from Soviet attack, were no longer needed and expensive to maintain. Selling them off aided the PLA's efforts to create a smaller, more sophisticated military.⁹⁰

⁸⁸John W. Lewis, Hua Di, and Xue Litai, "Beijing's Defense Establishment: Solving the Arms-Export Enigma," *International Security*, Vol. 15, No. 4, Spring 1991, p. 103.

⁸⁹This approach is not unique to China. The defense industries of many countries, including France and Israel, would not be viable without export markets.

⁹⁰Hyer, "China's Arms Merchants," p. 1111.