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**POSSIBLE CONSTRAINTS ON CHINA'S ARMS  
TRANSFERS**

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Restrictions imposed by the Chinese central government are the primary nonmarket constraint on China's export of weapons and related systems. The Chinese government might wish to prevent arms sales for three reasons: concern about the effects of weapons proliferation, a desire to adhere to international norms regarding arms transfers, and apprehension about the possible response of specific countries, particularly the United States, to its more controversial arms transfers. The significance of these possible constraints, however, depends on whether the Chinese government actually has control over China's arms transfers: a question we examine next.

**BEIJING'S ABILITY TO CONTROL ARMS TRANSFERS**

It is sometimes argued that China's central government should not be held responsible for China's arms transfer behavior because sales may take place without Beijing's knowledge or authorization.<sup>1</sup> Although this argument has some validity with regard to various kinds of dual-use equipment and materials, it is not valid with respect to China's sales of actual weapon systems. Most of China's most sensitive arms deals (as opposed to the sales of military-related

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<sup>1</sup>The Chinese government has *not* made this claim. Indeed, China's official position is that "major transfer items and contracts must be . . . approved by the State Council and the Central Military Commission." State Council of the People's Republic of China, "China: Arms Control and Disarmament," *Beijing Review*, November 27–December 3, 1995, p. 19. See also State Council of the People's Republic of China, "China's National Defense," *Beijing Review*, August 10–16, 1998, p. 34.

technologies and dual-use items) have been conducted by Poly Technologies, which gets approval directly from members of the Central Military Commission (CMC), who are among China's top leaders.<sup>2</sup> Other corporations are authorized to sell less-sophisticated conventional weapons and equipment, but if they wish to sell arms to sensitive regions or to sell more-sophisticated weapons and equipment, they are required to consult with the Ministry of Foreign Affairs (MFA) and other organizations.<sup>3</sup> If the MFA believes that a sale will adversely affect China's foreign relations, it will bring it to the attention of China's top leadership.<sup>4</sup> At times, the MFA's objections are overruled or ignored by the CMC, but this does not mean that the sale in question did not have the approval of the central government. Thus, it is likely that most sensitive weapons sales have occurred with the knowledge and approval of the central government.<sup>5</sup> The argument that China has no control over its arms industries is also undermined by the observation that Chinese arms have not been sold to potential military adversaries, such as Vietnam, India, or Taiwan.<sup>6</sup>

Beijing has argued that it does not control third-party transfers of its equipment.<sup>7</sup> Chinese officials noted, for example, that Iraq in the 1980s bought Chinese arms through Jordan and Egypt and that Iran

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<sup>2</sup>The Central Military Commission is China's highest military decisionmaking body. As of mid-1999, membership included supreme Chinese leader Jiang Zemin; two retired generals who are also members of the Politburo: Chi Haotian and Zhang Wannian; and the current chiefs of the major departments of the PLA (the General Staff Department, General Logistics Department, and General Political Department), along with the vice-chief of the General Political Department.

<sup>3</sup>However, personal and political networks often allow officials in various trading companies and other sellers to bypass formal approval channels. Wendy Frieman, "China's Defense Industries," *The Pacific Review*, Vol. 6, No. 1, p. 54.

<sup>4</sup>Lewis, Hua, and Xue, "Beijing's Defense Establishment," pp. 93–96. By law the premier is responsible for settling disputes between the MFA and weapons export corporations, although when Yang Shangkun was first vice chairman of the Central Military Commission, Deng Xiaoping (and later Jiang Zemin) apparently deferred to his judgment. *Ibid.*

<sup>5</sup>Again, this argument applies only to weapon systems, not to dual-use materials or technology.

<sup>6</sup>Godemont, "China's Arms Sales," p. 108.

<sup>7</sup>David Bonavia, "Cheap and Deadly," *Far Eastern Economic Review*, May 21, 1987, p. 33; "Who Us?" *Economist*, October 6, 1990, p. 38.

has worked through Pakistan and North Korea.<sup>8</sup> Although technically true, this argument is disingenuous. Beijing could easily influence recipients not to transfer Chinese arms to certain third parties if it so wished. Again, there is no evidence that Chinese arms have made their way to countries that Beijing would be opposed to, such as Vietnam, even though the Vietnamese inventory contains Chinese weapons transferred prior to the 1978 break.<sup>9</sup>

Transfers of dual-use materials and equipment present a different problem. Since the items are not weapons, their export is not channeled through one of the eight or so corporations authorized to conduct arms sales in China. Indeed, in general the transferring entity will have no connection to the military or defense industries.<sup>10</sup> A vast number of enterprises in China engage in export activities, and the system for monitoring and regulating their activities is weak. These enterprises are concerned only with maximizing revenues and are generally uninterested in whether their exports may have military applications. Even if the item they export is explicitly prohibited, the likelihood of the central government's learning of it prior to the sale is low. Limiting China's exports of dual-use goods, therefore, depends on the effectiveness of China's export control system.

China's export control system is just beginning to develop. In September 1997, Beijing announced that it would implement an export license system for nuclear equipment and drew up a list of nuclear materials, equipment, and technologies subject to export controls. In October 1997, China joined the Zangger Committee, which requires that its members allow nuclear exports only to facilities that are safeguarded by the IAEA. In June 1998, China announced export controls on dual-use materials and technology that are comparable to those mandated by the Nuclear Suppliers Group (which China has yet to formally join). To control the export of chemicals, in June 1996

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<sup>8</sup>Pan Guang, "China's Success in the Middle East," *Middle East Quarterly*, Vol. 4, No. 4, December 1997, p. 38.

<sup>9</sup>International Institute for Strategic Studies, *The Military Balance, 1997/98*, Oxford University Press, London, 1997, pp. 197–198.

<sup>10</sup>This is not true of all dual-use goods, of course. For example, the transfer of ring magnets to Pakistan in 1995–1996 was carried out by the China Nuclear Energy Industry Cooperation, a subsidiary of a firm under the direct control of the State Council, China's cabinet.

China issued a list of chemicals subject to supervision and control and in January 1998 the Chinese media reported that the government had issued instructions requiring a license for the export of chemicals and related technologies.<sup>11</sup> China now prohibits export of 10 of the 24 chemicals banned by the Australia Group (which it also has not yet joined). China has also agreed to conduct regular senior-level dialogues with the United States on arms control and nonproliferation, which should lead to further improvements in its export control system.<sup>12</sup>

Nevertheless, fundamental problems remain. Despite its international pledges and growing commitment to arms control, Beijing still lacks the procedures to effectively implement many agreements. China lacks effective “catch-all” provisions that restrict exports going to potentially sensitive programs. China also lacks well-developed procedures for working with foreign governments that seek to determine the end-use or end-user of systems transferred to China. Moreover, Beijing does not try to go beyond vague assurances from other governments when determining the ultimate destination and use of its exports. China does not share information well within its own government—different regions may not talk to one another or to Beijing, and many companies export without consulting with all the appropriate government agencies.<sup>13</sup> At times, China’s commercial interests and international promises conflict, because some Chinese organizations that are responsible for arms control are also tasked with encouraging exports.

Implementing an effective export control system will take time and face many difficulties. The greatest difficulties are likely to be in transparency and verification. The Chinese military in particular is skeptical of transparency, believing that it will give adversaries a future advantage. China also lacks a community well versed in the nuances of arms control.<sup>14</sup>

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<sup>11</sup>State Council, “China’s National Defense,” p. 33; “China Clamps Down on Its CW Trading,” *Jane’s Defense Weekly*, January 7, 1998, p. 5.

<sup>12</sup>Phyllis E. Oakley, Assistant Secretary of State for Intelligence and Research, testimony before the Senate Select Committee on Intelligence, January 28, 1998.

<sup>13</sup>Authors’ interviews with U.S. government officials, September 1998.

<sup>14</sup>Authors’ interviews conducted at the Institute of American Studies, Beijing, May 1998.

## BEIJING'S ATTITUDES TOWARD ARMS SALES AND PROLIFERATION

Until recently, China's leadership has shown little concern for the dangers of proliferation of nuclear, biological, and chemical weapons, the spread of ballistic missiles, and transfers of certain types of conventional weapons to unstable regions or regimes. In recent years, however, there have been indications that the attitudes of China's leadership are beginning to change, which could act as a restraint on future dangerous arms transfers by China.

Prior to 1982, China officially opposed the idea of nuclear non-proliferation.<sup>15</sup> Although China finally declared its support for the principle of nonproliferation in 1982, it nevertheless directly aided Pakistan's nuclear program throughout the 1980s. It also provided assistance to nuclear programs in Algeria and Iran. Although this latter assistance was technically consistent with the NPT, which China signed in 1992, and was conducted under IAEA safeguards, China's leadership can have had few illusions about their assistance contributing to efforts by those two countries to develop nuclear weapons.

However, in October 1997, China promised to end its nuclear cooperation with Iran, reportedly in part because China recognized that Iranian-sponsored instability in the Gulf could jeopardize China's energy security.<sup>16</sup> Nuclear weapons tests in May 1998 by China's neighbors India and Pakistan appear to have further awakened China's leaders to the dangers of nuclear proliferation. Interviews in China in June 1998 indicated concern that the Indian and Pakistani tests might legitimize tests by countries of more direct concern to China, such as Korea, Japan, or Taiwan.<sup>17</sup> At their summit in June,

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<sup>15</sup>Zachary S. Davis, "China's Nonproliferation and Export Control Policies," *Asian Survey*, Vol. 35, No. 6, June 1995, pp. 588–591. Opposition was on the grounds that it was discriminatory in favor of the existing nuclear weapons states. This view is still espoused in mainland-backed publications. See Chao Ching-tseng, Pan Chu-sheng, and Liu Hua-ch'iu, "Analysis of Situation in World Arms Control, Disarmament," *Hsien-tai Chun-shih (Conmilit)*, No. 230, March 6, 1996, pp. 15–16 in *Foreign Broadcast Information Service, Daily Report: China*, March 6, 1996.

<sup>16</sup>"A New China Embracing Nuclear Nonproliferation," p. 1.

<sup>17</sup>Interviews with researchers at the Chinese Academy of Social Sciences and China Institute for Contemporary International Relations, June 1998. Also see Andrew Mack,

Presidents Clinton and Jiang issued a joint statement in which they pledged to “prevent the export of equipment, materials, or technology that could in any way assist programs in India or Pakistan for nuclear weapons.”<sup>18</sup>

Chinese attitudes toward proliferation of chemical and biological weapons may also be changing. Although China signed the Biological Warfare Convention (BWC) in 1972 and the Chemical Weapons Convention (CWC) in 1993, it has continued to export equipment and materials to Iran that could be used to manufacture biological and chemical weapons, despite evidence that they probably are being used by Iran’s chemical and biological warfare programs. On the other hand, China has not exported actual chemical or biological weapons technology, despite believed capability in both areas. China has strengthened its controls over chemical exports in recent years, however, and at the Clinton-Jiang summit in June 1998 Beijing agreed to further strengthen its export controls.<sup>19</sup> Whether this reflects a change in attitude with regard to the dangers of spreading chemical and biological weapons or is merely a response to U.S. pressure is unclear.

China has been resistant to the idea that transfers of missiles represent a danger qualitatively different from other conventional arms transfers. From Beijing’s viewpoint, missiles are simply a delivery system no different from conventional aircraft (e.g., the F-16s the United States has sold to Taiwan), which have a greater range and payload than many missiles banned under the Missile Technology Control Regime (MTCR).<sup>20</sup> Beijing therefore sees the MTCR as sim-

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*Proliferation in Northeast Asia*, Henry L. Stimson Center, Washington DC, 1996, pp. 5–6.

<sup>18</sup>Quoted in Susan V. Lawrence, “Sparring Partners,” *Far Eastern Economic Review*, July 9, 1998, p. 13. However, China is apparently not ready to play an active role in preventing the spread of dangerous arms. Despite concern about the spread of NBC and missiles in Asia—particularly in India—Chinese interlocutors in interviews conducted at Chinese research institutions in May-June 1998, could think of no way that China would aid U.S. initiatives to control their spread beyond vague promises of diplomatic support. Economic sanctions were rejected for a variety of reasons, ranging from their limited impact to China’s “tradition” of non-interference in other countries’ affairs.

<sup>19</sup>Lawrence, “Sparring Partners,” p. 13.

<sup>20</sup>Wolfsthal, Jon Brook, “U.S. and Chinese Views on Proliferation: Trying to Bridge the Gap,” *The Nonproliferation Review*, Fall 1994, p. 61.

ply promoting the interests of advanced military powers such as the United States, which are able to defend themselves against air attacks but not against missile attacks.<sup>21</sup> Indeed, Chinese leaders may suspect that the MTCR was directed specifically against China.<sup>22</sup> Thus, while China has agreed, under U.S. pressure, to adhere to the guidelines of the MTCR, it has not formally joined the regime, which may suggest continuing opposition to the principle of nonproliferation of missiles. More important, Beijing has had no reservations about providing technical assistance to missile programs in Iran and Pakistan that are ostensibly for systems that fall below the MTCR threshold, despite the fact that this assistance undoubtedly aids other ballistic missile programs in both countries. At the Clinton-Jiang summit, China announced that it was "actively considering" joining the MTCR,<sup>23</sup> but whether this statement was simply a way of deflating American pressure on the subject or instead reflected changing attitudes about the dangers of missile proliferation is not clear. Until these attitudes change, concern about the dangers of missile proliferation is not likely to restrain China's transfers of missiles and related technology.

Beijing claims it already restricts its transfers of conventional arms. In 1988, China announced "three principles" for its arms sales: strengthening the buyer's legitimate self-defense needs, safeguarding peace and stability in the regions concerned, and not using military sales to interfere with the internal affairs of other states. These principles are vague and subjective, and in any case Beijing has clearly not always adhered to them. China has sold arms to highly unstable regions, such as the Persian Gulf, has supplied aggressive regimes such as Iraq, and has aided insurgents in countries such as Cambodia.<sup>24</sup> China also resists the idea that individual countries

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<sup>21</sup>Robert E. Mullins, "The Dynamics of Chinese Missile Proliferation," pp. 153–155; Roxane D.V. Sisimandis, "The Paradoxes of Asian Security," *The China Business Review*, November–December 1995, pp. 10–11. Another reason given for opposition to the MTCR is that China was not involved in creation of the regime. Wolfsthal, "U.S. and Chinese Views on Proliferation," p. 61.

<sup>22</sup>Godemont, "China's Arms Sales," p. 105.

<sup>23</sup>Lawrence, "Sparring Partners," p. 13.

<sup>24</sup>Chinese leaders have argued that weapon sales to volatile regions (such as the Persian Gulf in the 1980s) can actually contribute to stability by ensuring a military stalemate. Cheung, "Proliferation Is Good, and There's Money in It Too," pp. 27–28.

such as Iran should be subject to weapons embargoes. Nonetheless, there appears to be some recognition in Beijing that certain conventional weapons transfers can be destabilizing.<sup>25</sup>

### China's Degree of Adherence to Nonproliferation Regimes

Prior to 1992, the only nonproliferation treaty China was a party to was the Biological Warfare Convention, which it joined in 1984. Since 1992, however, China has joined most remaining major nonproliferation regimes. In 1992, China signed the NPT, in 1993 it joined the Chemical Weapons Convention, and in 1996 it signed the Comprehensive Test Ban Treaty (CTBT). China also joined the Zangger Committee (although not the Nuclear Suppliers Group) in 1997.<sup>26</sup> In addition, in 1992 China agreed bilaterally with the United States to adhere to the 1987 parameters of the MTCR. Since these regimes address many of the types of weapons considered most dangerous, the extent to which China actually abides by the rules will largely determine the degree to which it engages in dangerous arms transfers.

The decision to participate in international arms control regimes apparently reflects a judgment by China's leadership that the costs of openly refusing to adhere to international nonproliferation norms exceed the costs of accepting them. This decision may have been part of an effort to reduce China's isolation and improve its image after the 1989 Tiananmen killings. In any case, China's leaders evidently want to be viewed as abiding by these regimes. Thus, any accusations of violations produce vigorous denials and legalistic defenses. Nonetheless, as Beijing's ambivalence toward restrictions on arms transfers would suggest, China's adherence to these regimes is imperfect. In addition, China has violated the spirit of the regimes

<sup>25</sup>For example, "China . . . is very concerned about the adverse effects on world security and regional stability arising from excessive accumulations of weaponry." State Council, "China: Arms Control and Disarmament," p. 19.

<sup>26</sup>Mitchel B. Wallerstein, "China and Proliferation: A Path Not Taken?" *Survival*, Vol. 38, No. 3, Autumn 1996, p. 60; Kan, *China's Compliance with International Arms Control Agreements*, pp. 6–9. China is the only major nuclear supplier that is not a member of the Nuclear Suppliers Group, which requires that its members provide nuclear assistance only to those countries that have accepted IAEA safeguards on all facilities in the country ("full-scope safeguards").

by engaging in transfers which, if not necessarily explicitly banned, contradict the intent.

Although China has often violated the spirit of its nonproliferation commitments, there are relatively few instances of China violating the exact letter of these agreements.<sup>27</sup> The one publicly known possible violation of the NPT by China was its 1995 transfer of ring magnets to an unsafeguarded facility in Pakistan, which in the opinion of some experts violated the NPT, because the magnets represented “equipment or material especially designed or prepared for the processing, use or production” of fissionable materials to facilities not under IAEA safeguards.<sup>28</sup> This opinion was based on the argument that the ring magnets had no application other than in centrifuges used to make enriched uranium. However, because ring magnets do not appear on international lists for nuclear export controls (such as the IAEA Trigger List), it is possible that Chinese officials, although knowing full well what the magnets were to be used for, did not believe that they violated the NPT.<sup>29</sup> In May 1996, China pledged not to assist unsafeguarded nuclear facilities and it has not been accused of doing so since.<sup>30</sup>

Similarly, although the United States imposed sanctions on two private Chinese companies in 1997 for assisting Iran's chemical weapons program, Beijing has not been accused of knowingly violating the Chemical Weapons Convention.<sup>31</sup> China has been accused of exporting chemicals and equipment that can be used in the development of chemical or biological weapons, but these materials are not specifically banned by the CWC or BWC.

<sup>27</sup>“China's Broken Promises,” *Economist*, July 8, 1995, pp. 17–18.

<sup>28</sup>Subcommittee on International Security, Proliferation, and Federal Services, *The Proliferation Primer*, pp. 4–6.

<sup>29</sup>“Row Over?” *Economist*, May 18, 1996, p. 37. Ring magnets are a component, of magnetic suspension bearings used in gas centrifuges, which are on the Trigger List. Shirley A. Kan, *China's Compliance with International Arms Control Agreements*, p. 7.

<sup>30</sup>Subcommittee on International Security, Proliferation, and Federal Services, *The Proliferation Primer*, pp. 5–6, 9–10.

<sup>31</sup>In May 1997, the United States imposed sanctions on two Chinese companies and five Chinese individuals for knowingly assisting Iran's chemical weapons program. The two companies were not state-owned. Subcommittee on Security, Proliferation, and Federal Services, *The Proliferation Primer*, p. 8.

China did apparently violate the MTCR (which it has not formally joined but whose guidelines it has promised to abide by) when it transferred components of M-11 missiles to Pakistan in November 1992. Beijing argued that since the M-11 has a range of only 280 km, it did not violate the MTCR, which prohibits the transfer of missiles capable of carrying 500 kg to a range of 300 km or more. The U.S. position was that, since the M-11 has a payload of 800 kg, by reducing the payload the M-11 could be modified to carry 500 kg over 300 km and thus exceeded the MTCR parameters. The Chinese government may well have been acting in bad faith when it transferred M-11 missiles to Pakistan, but it may have done so in the belief that the M-11 technically did not violate the MTCR, or at least that it could credibly make such an argument. It is noteworthy, for example, that the system in dispute is the M-11 and not the M-9, which, with its 600-km range, clearly would violate the MTCR, despite the fact that the M-9 was originally developed for export.<sup>32</sup>

The Chinese government ultimately accepted the “inherent capabilities” argument in a subsequent agreement with the United States reached in October 1994 and does not appear to have engaged in further violations since this agreement. Iran’s recent development of an intermediate range missile, for example, is apparently based primarily on North Korean No Dong technology, not a Chinese system, despite previous reports that China and Iran were jointly developing a 1000-km solid-fuel missile.<sup>33</sup> Other U.S. complaints have focused on the transfer of subsystems and technology, violations of Category II of the MTCR guidelines, which China has not explicitly committed to upholding. Thus, although Beijing remains skeptical of the MTCR, it appears to be abiding by its pledges on missile transfers.

China may become more accepting of international regimes. Several Chinese analysts have noted that the coming generation of Chinese leaders is less inclined to view international relations in “zero-sum” terms and is less hostile toward U.S. dominance.<sup>34</sup> As described

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<sup>32</sup>Bates Gill, “Curbing Beijing’s Arms Sales.”

<sup>33</sup>Walter Pincus, “Iran May Soon Gain Missile Capability,” *Washington Post*, July 24, 1998, p. A28; Duncan Lennox (ed.), *Jane’s Strategic Weapon Systems*, Issue 18, May 1995.

<sup>34</sup>Authors’ interviews at the Center for American Studies, Fudan University, Shanghai, May 1998.

below, constant U.S. pressure may also be taking its toll, leading Chinese elites to recognize that even the sale of relatively small numbers of arms damages relations with the United States—perhaps China's most important foreign policy concern. In addition, China's leaders may come to regard proliferation as no longer in China's interests, particularly when the countries in question—Iran, Pakistan, and North Korea—are all in close proximity to China.

The positive trend in China's recent proliferation behavior could, of course, reverse in the coming years. If relations with the United States deteriorate, sales could increase if Beijing no longer sees value in appeasing Washington. Proliferation by others could also increase Chinese sales. Part of China's recent improvement in its proliferation behavior stems from its reluctance to be isolated. If it found that others were transferring sophisticated technologies, Beijing would have fewer inhibitions in doing so as well. Barring such developments, however, China is likely to continue or even increase its commitment to international arms control regimes.

### **U.S. Ability to Influence Beijing**

The United States and other nations can influence China's proliferation behavior. Perhaps the greatest point of leverage is that China's leaders clearly wish for China to be seen as a responsible member of the international community and recognize that open violations of nonproliferation agreements undermine this image. China has not sold arms to Iraq in violation of the UN embargo, for example, despite having a long-established military relationship with Baghdad.<sup>35</sup> In addition to appealing to Beijing's desire to be seen as a responsible power, the United States has various foreign policy tools, including access to U.S. technology, to influence China's arms sales behavior. Restrictions on transfers of U.S. technology led China to suspend—albeit temporarily—sales of antishipping cruise missiles to Iran in 1988 and to agree to adhere to the MTCR in 1992 and 1994. Similarly, in October 1997 Beijing pledged to end its nuclear assis-

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<sup>35</sup>Alexander T. Lennon, "Trading Guns, Not Butter," *The China Business Review*, March–April 1994, p. 48.

tance to Iran partly because the United States said it would end its ban on sales of nuclear power technology to China.<sup>36</sup>

Pressure from the United States and others has prevented arms transfers in a number of other instances. China's leaders recognize that arms transfers to countries such as Iran affect China's relationships with the United States and other major countries.<sup>37</sup> Israel was apparently able to prevent the transfer of M-9 missiles to Syria, and U.S. pressure may have led China to cancel an agreement to transfer M-11 missiles to Iran in 1991 and again in 1992.<sup>38</sup> In 1995, U.S. lobbying may have led China to cancel its plan to provide a complete nuclear reactor to Iran, even though this transfer was legal under the NPT and Zangger Committee provisions. In January 1998, Defense Secretary William Cohen indicated that Beijing had assured Washington that China would not transfer more antishipping missiles to Iran.<sup>39</sup>

U.S. pressure, on top of Beijing's general desire to be seen as a responsible power, has also resulted in China's increasing its membership in, and compliance with, international nonproliferation regimes, despite its initial opposition to the nonproliferation norm. U.S. pressure, for example, led China to pledge in 1992 to abide by the MTCR. When the United States objected to China's transfer of M-11 missiles to Pakistan, China agreed to clarify its commitment to include the M-11. In 1996, U.S. pressure caused China to promise not to assist unsafeguarded nuclear facilities and in 1997 and 1998 to announce more-comprehensive export control regulations.

However, Beijing's track record of actually implementing its promises on arms transfers is mixed. In March 1988, for example, China pledged that it would not sell Iran more antiship cruise mis-

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<sup>36</sup>Subcommittee on International Security, Proliferation, and Federal Services, *The Non-Proliferation Primer*, p. 10. This leverage was particularly effective because Congress was also considering increasing restrictions on technology flows to China if Beijing did not limit its cooperation with Iran.

<sup>37</sup>Israel, for example, is one of China's most important sources of advanced military technology.

<sup>38</sup>Godemont, "China's Arms Sales," pp. 103–104; Gill, *Silkworms and Summitry*, p. 10.

<sup>39</sup>Kan, *Chinese Proliferation of Weapons of Mass Destruction: Current Policy Issues*, p. 6.

siles. In fact, after 1990, China began providing Iran with more-advanced C-801 and C-802 antishipping missiles.<sup>40</sup> In addition, in the early 1990s, China reportedly helped Iran with indigenous production of the HY-2 Silkworm and may now be helping Iran indigenously produce a medium-range antiship missile, the FL-10, which is based on Chinese designs.<sup>41</sup> These latter actions are reflective of a general pattern—after promising to refrain from sales of a particular system, Beijing has instead provided know-how and technical assistance. Despite stopping sales of the M-9 and M-11 missiles to Iran after U.S. objections, for example, Beijing has provided production equipment, expertise, and technology that have contributed to Iran's indigenous missile development programs.<sup>42</sup> Similarly, despite China's agreement not to transfer M-11 missile technology to Pakistan, missile technicians and missile-related equipment reportedly continued to travel between China and Pakistan through 1997.<sup>43</sup>

From Beijing's perspective, the United States also has not carried out the spirit of its agreements with China regarding arms sales. In the "August 17" communiqué of 1982, the United States pledged that "its arms sales to Taiwan will not exceed, either in qualitative or quantitative terms, the level of those supplied in recent years."<sup>44</sup> In fact, although sales of complete systems to Taiwan have gradually decreased since 1982, this decrease has been more than made up for by transfers of military technology in what one Western observer has described as "a sort of technology laundering scheme."<sup>45</sup> In addition, in 1992 the United States decided to sell F-16s to Taiwan in what Beijing viewed as a violation of Washington's commitment to

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<sup>40</sup>Gill, *Silkworms and Summitry*, p. 7.

<sup>41</sup>Gill, *Silkworms and Summitry*, p. 9.

<sup>42</sup>Gill, *Silkworms and Summitry*, p. 11.

<sup>43</sup>Gary Milhollin, Testimony before the Senate Intelligence Committee, September 18, 1997.

<sup>44</sup>See, for example, Stephen Friedman and Elizabeth Economy, *Managing the Taiwan Issue: Key Is Better U.S. Relations with China*, Council on Foreign Relations, New York, 1995, p. 48.

<sup>45</sup>Eric Arnett, "Military Research and Development," in Stockholm International Peace Research Institute, *SIPRI Yearbook 1997*, p. 235.

the August 17 communiqué.<sup>46</sup> As long as Beijing perceives Washington as carrying out the letter but not the spirit of its own bilateral commitments, China is likely to do so as well.

A lack of allied support weakens U.S. pressure on China. So far, the United States stands alone in taking action to prevent the spread of missile and nuclear technologies by China to Iran. Unless the United States has a monopoly on a technology, the effectiveness of policy tools such as restricting access to key technologies is thus limited. U.S. ability to influence China's (and other countries') arms transfers would be greatly enhanced if other industrial countries would form a united front with the United States to withhold access to markets or technology if China persists in carrying out particularly threatening transfers.

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<sup>46</sup>The F-5 was the most advanced aircraft the United States had previously sold to Taiwan. Washington argued that, since the F-5 was no longer produced, the F-16 was the closest equivalent of aircraft previously supplied to Taiwan.