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► **To cite this version:**

Hugo Meijer. Balancing Conflicting Security Interests: U.S. Defense Exports to China in the Last Decade of the Cold War. *Journal of Cold War Studies*, 2015, 17 (1), pp.4 - 40. 10.1162/JCWS_a_00529 . hal-03459494

HAL Id: hal-03459494

<https://sciencespo.hal.science/hal-03459494>

Submitted on 1 Dec 2021

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Balancing Conflicting Security Interests

U.S. Defense Exports to China in the Last Decade of the Cold War

❖ Hugo Meijer

Introduction

From 1949 until the U.S.-China rapprochement in the early 1970s, the bilateral relationship between Washington and Beijing was fraught with strategic distrust. After the Korean War began in 1950, the United States imposed a strict embargo against the People's Republic of China (PRC) and urged West European countries and Japan to introduce similar controls on exports to the PRC. Throughout the 1950s and 1960s, the United States was more willing than its allies to implement tight restrictions on trade with China. Indeed, U.S. controls on strategic trade with China during this time were more stringent than those imposed against the Soviet Union. The harsher export control treatment of China relative to the Soviet Union came to be known as the “China Differential.”¹ The disparity reflected the U.S. perception at the time that the PRC was the single greatest security threat to U.S. interests in East Asia because of what U.S. officials perceived as aggressive Chinese foreign policy behavior in the region and Mao's commitment to sponsor, support, and direct wars of national liberation.² U.S. officials also believed that the “China

1. In 1957, in light of the perceived receding security concerns over China after the end of the Korean War, Western Europe, led by Great Britain, abandoned the differential and decided to treat the USSR and the People's Republic of China (PRC) equally. The United States, by contrast, wanted to retain the differential, fearing that a relaxation of controls would contribute to the growth of China's economic and military capabilities. The United States continued to impose a unilateral “China Differential” until the Sino-American rapprochement of the early 1970s. See Shu Guang Zhang, *Economic Cold War: America's Embargo against China and the Sino-Soviet Alliance, 1949–1963* (Washington, DC: Woodrow Wilson Center Press, 2001), ch. 7.

2. See Nancy Bernkopf Tucker, *The China Threat: Memories, Myths, and Realities in the 1950s* (New York: Oxford University Press, 2012); and William Cohen, *America's Response to China: A History of Sino-American Relations*, 5th ed. (New York: Columbia University Press, 2010), pp. 206–214.

Differential,” by forcing Beijing to depend overwhelmingly on Moscow’s aid, could strain the relationship and contribute to the emerging Sino-Soviet split.³

Starting in the 1970s, with the U.S.-China rapprochement under President Richard Nixon, Washington made the first gestures to loosen the restrictions on bilateral trade. The Nixon administration abolished the “China Differential” and put in place a policy of “evenhandedness,” which meant that the United States would allow exports to the PRC of technologies similar to those permitted to the Soviet Union and Eastern Europe. But in the aftermath of the establishment of full U.S.-PRC diplomatic relations in late 1979 and especially after the Soviet invasion of Afghanistan in December 1979, China and the United States gradually forged a strategic cooperation based on military exchanges, intelligence-sharing, and technology transfers. This pro-China “tilt” marked a shift in U.S. export control policy toward the establishment of a new “China Differential”—but one that, unlike the differential in the 1950s, was in favor of Beijing at the expense of Moscow.

This article investigates the bifurcation in U.S. export control policy toward the PRC and the Soviet Union in the last decade of the Cold War. Specifically, it seeks to explain the rationale and evolution of U.S. defense exports to China in the 1980s and the abrupt collapse of U.S.-China military cooperation in 1989. On the one hand, Washington imposed increasingly stringent national and multilateral export controls against the USSR in order to preserve a qualitative gap between Soviet and U.S. state-of-the-art defense technologies. On the other hand, the United States gradually loosened controls on exports of armaments and dual-use goods to China. The tightening of Western export controls on the Soviet Union coupled with a major liberalization of controls on defense-related exports to the PRC steadily broadened the “China Differential” throughout the 1980s. Although the United States increased the flow of defense technology exports to the PRC in a triangular diplomatic game aimed at counterbalancing the USSR, the volume and quality of these transfers were carefully calibrated to avoid bolstering China’s offensive capabilities vis-à-vis U.S. friends and allies in the region. This preferential export control treatment for China relative to that of the USSR lasted until the 1989 Tiananmen Square crackdown, the subsequent U.S. sanctions, and the end of the Cold War.

A voluminous literature has surveyed U.S. export controls toward the Soviet Union, as well as the chief multilateral institution governing East-West strategic trade during the Cold War, the Coordinating Committee for

3. See Rosemary Foot, *The Practice of Power: U.S. Relations with China since 1949* (Oxford, UK: Oxford University Press, 1995), ch. 3. On this point, see also Zhang, *Economic Cold War*.

Multilateral Export Controls (COCOM).⁴ U.S. restrictions on technology transfers and trade with the PRC in the first decades of the Cold War period have also been the subject of works by both historians and political scientists.⁵ The most detailed account of the U.S.-led embargo against China from the late 1940s to the early 1960s is Shu Guang Zhang's *Economic Cold War: America's Embargo against China and the Sino-Soviet Alliance, 1949–1963*. Drawing on documents from the U.S. State Department, the British Foreign Office, the archives of the Russian Foreign Ministry, and the Chinese provincial archives, it traces the origins and development of the Western embargo on China in the early Cold War period.

In contrast, fewer studies have specifically focused on U.S.-China military relations in the 1980s, and the existing literature overwhelmingly relies on secondary sources. This is the case with works by Tan Qingshan, Eden Woon, Larry Wortzel, and Jing-Dong Yuan on U.S. technology transfers to the PRC.⁶ Furthermore, the extant studies tend to gloss over the heterogeneous and

4. See, among others, Gunnar Adler-Karlsson, *Western Economic Warfare, 1947–1967: A Case Study in Foreign Economic Policy* (Stockholm: Almqvist & Wiksell, 1968); Gary K. Bertsch, ed., *Controlling East-West Trade and Technology Transfer: Power, Politics, and Policies* (Durham, NC: Duke University Press, 1988); Gary Bertsch, *East-West Strategic Trade: COCOM, and the Atlantic Alliance* (Paris: Atlantic Institute for International Affairs, 1983); Philip Hanson, *Trade and Technology in Soviet-Western Relations* (New York: Columbia University Press, 1981); Ian Jackson, *The Economic Cold War. America, Britain and East-West Trade, 1948–63* (New York: Palgrave Macmillan, 2001); Michael Mastanduno, *Economic Containment: COCOM and the Politics of East-West Trade* (Ithaca, NY: Cornell University Press, 1992); and Bruce Parrott, ed., *Trade, Technology, and Soviet-American Relations* (Bloomington: Indiana University Press, 1982).

5. See, among others, Frank Cain, "The U.S.-Led Trade Embargo on China: The Origins of CHINCOM, 1947–1952," *Journal of Strategic Studies*, Vol. 18, No. 4 (December 1995), pp. 33–54; Frank Cain, "Computers and the Cold War: United States Restrictions on the Export of Computers to the Soviet Union and Communist China," *Journal of Contemporary History*, Vol. 40, No. 1 (January 2005), pp. 131–147; Foot, *The Practice of Power*, ch. 3; Jackson, *The Economic Cold War*, pp. 148–154; and Zhang, *Economic Cold War*.

6. Qingshan Tan, *The Making of U.S. China Policy: From Normalization to the Post-Cold War Era* (Boulder, CO: Lynne Rienner, 1992), chs. 4–5; Eden Woon, "Chinese Arms Sales and U.S.-China Military Relations," *Asian Survey*, Vol. 29, No. 6 (1989), pp. 601–618; Larry Wortzel, "U.S. Technology Transfer Policies and the Modernization of China's Armed Forces," *Asian Survey*, Vol. 27, No. 6 (1987), pp. 615–637; and Jing-Dong Yuan, "The Politics of the Strategic Triangle: The U.S., COCOM, and Export Controls on China, 1979–1989," *Journal of Northeast Asian Studies*, Vol. 14, No. 1 (1995), pp. 47–79. In addition, a few articles in law journals have reported the evolution of U.S. administrative regulations on export controls toward China throughout the Cold War. See Luke Lee and John McCobb, "United States Trade Embargo on China, 1949–1970: Legal Status and Future Prospects," *New York University Journal of International Law and Politics*, Vol. 4, No. 1 (1971), pp. 9–10; John McKenzie, "China and U.S. Trade: Recent Export Regulations," *International Lawyer*, Vol. 18, No. 2 (1984), pp. 455–464; Madelyn Ross, "China and the United States' Export Controls System," *Columbia Journal of World Business*, Vol. 21, No. 1 (1986), pp. 27–33; and John Yo-Hwan Lee, "The 1983 Amendment to the Export Administration Regulations: The Status of Export Controls to the People's Republic of China," *Northwestern Journal of International Law and Business*, Vol. 6, No. 4 (1984), pp. 1096–1120.

conflicting national security interests that shaped U.S. export control policy in the last decade of the Cold War. Jing-Dong Yuan, for instance, seeks to explain the development of and rationale behind the “China Differential” in the 1980s by tracing the origin of U.S. technology transfers to China in the military dynamics of the strategic triangle: the “‘China Card’ would be played to recast the balance of [military] power in Washington’s favor” vis-à-vis the Soviet Union.⁷ Yet, besides this key objective, Yuan does not account for the other U.S. national security interests at stake in the U.S.-PRC military relationship, such as the likely consequences of defense exports to China for U.S. friends and allies in Northeast and Southeast Asia. The most thorough analysis of the negotiations over the formation of U.S.-China strategic cooperation from the Sino-American rapprochement to the late 1980s is Robert Ross’s *Negotiating Cooperation: The United States and China, 1969–1989*, which relies on public speeches, memoirs of policymakers, contemporaneous newspaper articles, and interviews with U.S. officials.⁸ Ross offers a subtle and nuanced account of the main drivers of and obstacles to Sino-American military cooperation in the 1970s and 1980s. However, even though he draws on declassified materials when covering the 1970s, the documents he uses when analyzing U.S.-China security cooperation in the early to mid-1980s are mainly secondary sources.⁹ Furthermore, Ross largely slights U.S.-PRC strategic cooperation in the latter half of the 1980s and the key U.S. decisions that affected military cooperation with China from 1985 to the Tiananmen Square crackdown.¹⁰

By relying on a large body of new written and oral primary sources, this article builds on but goes beyond the existing literature to enrich our understanding of this strategically important yet underexplored dimension of U.S.-China relations in the last decade of the Cold War. In particular, contrary to what is often assumed in the literature, the article shows that Washington’s assessment of the required degree of defense cooperation with Beijing was not driven solely by the objective of using the “China card” against the Soviet Union. A broader range of national security considerations shaped U.S. policy on military cooperation with the PRC, namely, the desire not to enhance China’s offensive capabilities vis-à-vis the United States and U.S. friends and allies in East Asia (Taiwan, Japan, South Korea, Malaysia, Indonesia, and others),

7. Jing-Dong Yuan, “The Politics of the Strategic Triangle,” p. 47.

8. Robert Ross, *Negotiating Cooperation: The United States and China, 1969–1989* (Stanford, CA: Stanford University Press, 1995).

9. *Ibid.*, chs. 6–7.

10. The same critique can be directed at Harry Harding’s *A Fragile Relationship: The United States and China since 1972* (Washington, DC: Brookings Institution Press, 1992).

the impact of defense transfers to China on U.S.-Soviet diplomatic relations, and the goal of influencing China's nuclear proliferation practices, especially in the Middle East. As a consequence, the U.S. government needed to manage and balance multiple and diverging national security interests and faced delicate tradeoffs in its military relationship with the PRC throughout the decade. These facets of U.S.-China security cooperation have been largely neglected in the existing literature on the subject. The article therefore examines the main decisions that marked the rise and fall of Sino-American strategic relations in the 1980s on the basis of a wide range of recently declassified documents stored at the National Security Archive, congressional hearings, and interviews with 39 individuals who served on the U.S. National Security Council (NSC) staff or at the Departments of State, Defense, and Commerce and helped to formulate U.S. export control policy toward China in the 1980s.¹¹

From Rapprochement to 1980: The Origins of U.S.-China Military Cooperation

The considerations that spurred the Nixon administration to move toward a rapprochement with the PRC were primarily strategic. President Nixon's short-term objective was to facilitate an end to the Vietnam War by isolating Hanoi from one of its principal supporters, the PRC, and thereby bringing pressure on North Vietnam to adopt a more conciliatory posture.¹² In the longer run, taking advantage of the Sino-Soviet split, a strategic partnership with China could increase U.S. leverage in relations with the USSR and encourage restraint in Moscow's foreign policy. The United States and China increasingly came to see each other, in the words of Henry Kissinger, as "tacit allies."¹³ But after a modest liberalization of trade controls in the early 1970s, the improvement of

11. The declassified documents on U.S. export control policy toward China were found in the following collections of the National Security Archive (NSArchive): *China and the United States: From Hostility to Engagement, 1960–1998* (hereinafter China and the United States); *U.S. Intelligence and China: Collection, Analysis, and Covert Action* (hereinafter U.S. Intelligence and China); *Japan and the United States: Diplomatic, Security, and Economic Relations, 1960–1976* (hereinafter Japan and the United States); *National Security Agency—Organization and Operations, 1945–2009* (hereinafter National Security Agency).

12. On the Sino-American rapprochement see, among others, Evelyn Goh, *Constructing the U.S. Rapprochement with China, 1961–1974: From 'Red Menace' to 'Tacit Ally'* (New York: Cambridge University Press, 2005).

13. The White House, "My Trip to China," Top Secret, Memorandum from National Security Adviser Henry Kissinger to President Richard Nixon, 2 March 1973, in NSArchive, Japan and the United States.

U.S.-PRC relations slowed in the mid-1970s. Domestically, the two countries experienced leadership succession crises with the death of Zhou Enlai and Mao Zedong in 1976 and the Watergate scandal in the United States that resulted in Nixon's resignation under pressure in 1974. Furthermore, the policy of détente with the Soviet Union under both Nixon and his successor, Gerald R. Ford, made U.S. officials reluctant to foster security cooperation in a way that would antagonize the USSR.

After Jimmy Carter became president, Secretary of State Cyrus Vance favored the continuation of “evenhandedness” in technology exports to Beijing and Moscow, fearing that enhanced security cooperation with China might be perceived as too provocative and detrimental to U.S.-Soviet relations.¹⁴ Vance wanted to revive détente with the Soviet Union and to agree with Moscow on a strategic arms limitation treaty. In contrast, Secretary of Defense Harold Brown and National Security Adviser Zbigniew Brzezinski gave higher priority to bolstering the U.S. strategic relationship with China so that it would become a permanent part of Moscow's calculations: Soviet leaders should come to believe that aggressive Soviet moves abroad would reinforce U.S.-China military cooperation.¹⁵ Brzezinski strongly opposed Vance's “evenhanded” policy and forcefully pushed for U.S.-PRC security cooperation.¹⁶ Until December 1979, however, Carter continued to support Vance's views and to pursue a policy of “evenhandedness” toward China and the Soviet Union.

The establishment of Sino-American diplomatic relations and the Soviet invasion of Afghanistan in late 1979 sparked the inception of U.S.-China military cooperation that lasted until 1989. The Soviet invasion of Afghanistan prompted Carter to adopt an export control policy that distinctly favored the PRC at the expense of the USSR—the so-called pro-China “tilt”—as advocated by Brzezinski.¹⁷

Secretary of Defense Brown's visit to the PRC in January 1980—the first such visit by a U.S. defense secretary—was not originally intended to establish military cooperation between the two countries. Brown had been instructed by the president that no military cooperation would take place, but in the aftermath of the Soviet invasion of Afghanistan the guidelines for Brown's

14. Robert Sutter, *The China Quandary: Domestic Determinants of U.S. China Policy, 1972–1982* (Boulder, CO: Westview Press, 1983), p. 7.

15. Michel Oksenberg, “A Decade of Sino-American Relations,” *Foreign Affairs*, Vol. 61, No. 1 (Summer 1982), p. 190.

16. Sutter, *The China Quandary*, p. 7.

17. Jonathan Pollack, *The Lessons from Coalition Politics: Sino-American Security Relations* (Santa Monica, CA: RAND Corporation, 1984), pp. 46–47.

visit were modified to seek broader strategic cooperation with China.¹⁸ On 4 January 1980, just a few hours before Brown's departure for Beijing, Carter authorized the sale of nonlethal military equipment to China.¹⁹ Brown then followed up with the launch of military relations between the United States and the PRC. During the eight-day visit, the two governments agreed to initiate regular exchanges of high-ranking U.S. and Chinese military officials and working-level military delegations.²⁰ The two countries also strengthened their cooperation in intelligence sharing. The Pentagon provided the Chinese with sensitive intelligence, including satellite imagery, on Soviet troop deployments along the Soviet-Chinese border and established two stations on Chinese territory to monitor the nuclear tests and strategic nuclear deployments of the Soviet Union.²¹ These stations in China partly filled the gap created by the dismantlement of U.S. listening posts along the 1,200-mile Soviet-Iranian border after the February 1979 revolution in Iran.²² Furthermore, as Winston Lord, who served as U.S. ambassador to the PRC from 1985 to 1989, later explained, "the CIA was doing two things: it was cooperating with the Chinese in getting arms to Pakistan to send them to the Mujahideen in Afghanistan, but at the same time the CIA was spying as best as it could against China as they were spying on us. So it was a very ambivalent relationship."²³ An additional element of U.S.-China defense cooperation discussed during Brown's visit was U.S. and Chinese military support for Pakistan and assistance to Afghan rebels. The Chinese informed Brown that the PRC would increase the covert supply of weaponry to the Afghan rebels, principally through Pakistan.²⁴ The Chinese leader Deng Xiaoping told Brown that China and the United States "should unite to oppose the Soviets" and "should turn Afghanistan into a quagmire for the Soviets."²⁵ The U.S. Central Intelligence Agency (CIA) began purchasing from the Chinese government assault rifles, grenade launchers,

18. Harding, *A Fragile Relationship*, p. 91.

19. Pollack, *The Lessons from Coalition Politics*, pp. 46–47.

20. Harding, *A Fragile Relationship*, p. 91. For a description of U.S.-China military-to-military relations from 1979 to 1985, see U.S. Defense Intelligence Agency, *United States-China Military Relations, 1979–1985: Analysis and Chronology*, Classification Unknown, Working Paper, 2 January 1986, in NSArchive, China and the United States.

21. Harding, *A Fragile Relationship*, p. 92.

22. For details on these sites, see *A Sourcebook on the TACKSMAN I and TACKSMAN II ELINT Bases in Iran* (2012), available on the website of the Federation of American Scientists, <http://www.fas.org/irp/eprint/tacksman.pdf>.

23. Winston Lord, interview, New York, 22 April 2010.

24. Pollack, *The Lessons from Coalition Politics*, p. 54.

25. Richard Solomon, *U.S.-PRC Political Negotiations, 1967–84: An Annotated Chronology*, Secret, RAND Corporation, 1985, p. 79, in NSArchive, China and the United States.

mines, and SA-7 light anti-aircraft weapons, which were then shipped to Pakistan; and the Chinese agreed to supply U.S.-made Stinger surface-to-air missiles to Afghan rebels.²⁶ The PRC also began to channel mortars, machine guns, rocket launchers, and ammunition into Afghanistan on mules traversing the Karakoram Highway.²⁷ With regard to U.S. defense technology exports to China, Brown during his visit “informed the Chinese of the President’s decision of Friday, January 4, that [the U.S. was] now prepared to consider sale of [nonlethal] military equipment, but not arms, to China on a carefully selected case-by-case basis.”²⁸ The following month, on 25 April 1980, the administration modified dual-use exports controls by removing China from the same category of export controls as the Soviet Union (“Country Group Y”) and setting up a special category for the PRC known as “Country Group P.” This shift in U.S. policy was in line with a request made more than a year earlier by Deng during a visit to the United States, when he lamented that China continued to be in the same Country Group as Moscow and urged that the PRC be placed in a category labeled with another of the 26 letters in the English alphabet.²⁹ The administration initially made no change but by 1980 concluded that the “inclusion of China in Category Y with the Soviet Union is an unnecessary irritant to our relations with China. Changing the name of the category would not affect our policy on exports to China . . . nor would it directly affect COCOM since this category is used only within the USG [US government].”³⁰ Country Group P and Country Group Y were identical in their level of restrictiveness and licensing procedures.³¹ Nevertheless, the creation of this China-specific group did signal a desire to differentiate between the export control treatment of the PRC and of the USSR.

In the second half of 1980, U.S. export control policy toward China was based on several principles: a willingness to consider, case-by-case, the transfer

26. See James Mann, *About Face: A History of America’s Curious Relationship with China from Nixon to Clinton* (New York: Alfred Knopf, 1999), pp. 136–139; Steve Coll, “Anatomy of a Victory: CIA’s Covert Afghan War,” *The Washington Post*, 19 July 1992, pp. A1, A11; and Steve Coll, “In CIA’s Covert Afghan War, Where to Draw the Line Was Key,” *The Washington Post*, 20 July 1992, p. A3.

27. Mann, *About Face*, p. 136.

28. U.S. Department of State, “Sales of Sensitive Equipment,” Top Secret, Memorandum from Assistant Secretary of State for East Asian and Pacific Affairs Richard Holbrooke, Deputy Assistant Secretary of Defense for International Security Affairs Nicholas Platt, and Michael Oksenberg of the National Security Council (NSC) Staff, to Secretary of State Cyrus Vance, Secretary of Defense Harold Brown, and National Security Adviser Zbigniew Brzezinski, 22 January 1980, in NSArchive, China and the United States.

29. Ross, *Negotiating Cooperation*, p. 149.

30. U.S. Department of State, “Technology Transfers and Military Equipment Sales to China,” 1980.

31. See Yo-Hwan Lee, “The 1983 Amendment to the Export Administration Regulations,” p. 1105 n. 73.

of dual-use technology for military use; a willingness to consider, case-by-case, the sale of nonlethal military equipment and technology; no authorization for government-to-government Foreign Military Sales (FMS) to China; restricting shipments of dual-use and military support technology and equipment to those that could be transacted commercially through export licensing; a continued prohibition against sales of weapons systems; assurance to U.S. allies that all military and dual-use technology sales to China would be coordinated through existing COCOM machinery and a request that they do likewise; and a neutral attitude toward sales of defensive weapons to China by third countries.³²

The Carter administration's underlying rationale in taking this first step toward enhanced U.S. technology transfers to China was the need to balance several conflicting national security interests. Economic considerations at that time had little effect on U.S. export control policy. Indeed in 1980, Sino-American trade amounted to only \$4.8 billion.³³ As explained by Donald Keyser, who headed the political section at the U.S. embassy in Beijing responsible for Chinese domestic issues in 1982–1983 and then served as deputy for political, military, consular/asylum, and cultural affairs in the State Department's Office of Chinese and Mongolian Affairs, the first objective in U.S. export control toward the PRC "had little to do with economic or commercial considerations. The basic consideration was strategic; the driving force was overwhelmingly strategic, it had nothing to do with commercial factors."³⁴ The United States wanted to contribute to the technological modernization of the PRC in the context of the strategic triangle, playing the "China card" against the USSR.

This objective continued to drive U.S. policy after Ronald Reagan was inaugurated as U.S. president in January 1981. A declassified Department of Defense memorandum from 1981 stresses that

China is important to the U.S. as a strategic counterweight to the Soviet Union. . . . The Chinese tie down 47 Divisions along the 3,000 miles Sino-Mongolian-Soviet border. About 25% of the Soviet defense effort, or \$40 billion annually, is devoted to counter the direct Chinese threat. . . . The strategic

32. U.S. Department of Defense, "Military Sales to China," Secret, Memorandum for Principal Deputy Assistant Secretary of Defense for International Security Affairs Franklin Kramer, 23 February 1981, in NSArchive, China and the United States.

33. U.S. International Trade Commission (USTIC), Interactive Tariff and Trade Database, available at <http://dataweb.usitc.gov>.

34. Donald Keyser, interview, Washington, DC, 8 May 2010.

objectives of U.S. policy to the PRC should be to: maintain, and if possible, enhance China's military value as a strategic counterweight to the Soviet Union.³⁵

Similarly, Stephen Bryen, a senior U.S. Defense Department official under Reagan, later explained that the United States

had to engage China in order to balance off Soviet power. In those days, Soviet forces also had the task of confronting China. Across the border, the Russians had large installations facing the Chinese. So the idea was that if we could use China as a foil, it would tie down Soviet forces and essentially reduce the impact on NATO of the Soviet military buildup by requiring the Soviets to deploy some of their forces facing China.³⁶

However, the Reagan administration also wanted to keep careful track of the potential national security consequences of different export control policy options on U.S.- Soviet diplomatic relations: "any change [in U.S. export control policy] which would result in the sale of weapons technology or weapons systems to the Chinese would inevitably lead to heightened Soviet concerns vis-à-vis China's military capabilities. . . . There is concern that we not move so far with the Chinese that we reduce prospects for improving U.S.- Soviet relations."³⁷ A third U.S. security objective was a desire to avoid the transfer of defense technologies that could enhance "Chinese capabilities genuinely threatening to U.S. allies and friends in Asia."³⁸ Donald Keyser later recalled that "from the U.S. standpoint, the concern was that the Chinese did not acquire the capabilities that would enhance their offensive potential vis-à-vis Taiwan in particular, and other U.S. allies in the Pacific on the other hand."³⁹ As Robert Ross has shown, the Taiwan issue limited the degree of U.S.-PRC bilateral security cooperation throughout the decade.⁴⁰ The 1979 Taiwan Relations Act (TRA) stated that the United States would consider "any effort to determine the nature of Taiwan by other than peaceful means" as "a threat to the peace of the Western Pacific area and of grave concern to the United States." The TRA also declared that the United States would make available to Taiwan "defense articles and defense services in such quantity

35. U.S. Department of Defense, "Military Sales to China," 1981.

36. Stephen Bryen, interview, Washington, DC, 22 November 2010.

37. U.S. Department of Defense, "Military Sales to China," 1981.

38. *Ibid.*

39. Donald Keyser, interview, Washington, DC, 18 May 2010. Keyser was chief of the political section unit responsible for Chinese domestic issues in the U.S. embassy in Beijing (1982–1983) and then deputy for political, military, consular/asylum, and cultural affairs in the State Department's Office of Chinese and Mongolian Affairs (1983–1985).

40. Ross, *Negotiating Cooperation*, p. 114.

as may be necessary to enable Taiwan to maintain a sufficient self-defense capability.”⁴¹ Furthermore, several Asian countries, such as Malaysia, Indonesia, and South Korea, had expressed their concerns to the U.S. government over its defense technology transfers to the PRC.⁴² The administration therefore considered that “a change in U.S. policy to permit arms sales to the PRC would probably cause insurmountable problems in our relations with the individual states” in East and Southeast Asia.⁴³ On the basis of these latter considerations, the U.S. government decided to continue to restrict technologies that would make a “direct and significant contribution” to four key areas: nuclear weapons and their delivery systems, electronic warfare, anti-submarine warfare, and intelligence gathering.⁴⁴

Twice as Much as the Soviet Union: The “Two-Times” Policy and the Taiwan Conundrum

In 1981 and early 1982 the U.S.-PRC military relationship was temporarily slowed by bilateral disagreements over Taiwan. After a presidential campaign in which he had declared that he was in favor of resuming official relations with the Taipei government, Reagan took office determined to improve U.S.-Taiwan relations either through the restoration of official bilateral contacts or through increased arms sales. At the same time, disagreements emerged within the U.S. government over the course of U.S. policy toward Beijing and Taipei.⁴⁵ On the one hand, Reagan’s national security adviser, Richard Allen; the director of policy planning at the State Department, Paul Wolfowitz; and the chief NSC official overseeing Asian affairs, Gaston Sigur, shared the view that although the U.S.-PRC relationship was important, the administration should bolster relations with Taipei and sell arms to the island in conformity with the TRA. On the other hand, Vice President George H. W. Bush, who had been chief of the U.S. liaison office in the PRC in the mid-1970s, and

41. *Taiwan Relations Act*, P.L. 96-8, 10 April 1979.

42. U.S. Department of Defense, “Military Sales to China,” 1981. Japan had expressed “no clear consensus . . . except that any U.S. policy change should be preceded by formal consultations” with Tokyo.

43. *Ibid.*

44. Henry Kenny, “Underlying Patterns of American Arms Sales to China,” in U.S. Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers—1986* (Washington, DC: ACDA, 1987), p. 61.

45. On the debates within the Reagan administration over U.S. “China policy,” see Cohen, *America’s Response to China*, pp. 225–231; and Ross, *Negotiating Cooperation*, pp. 166–169.

Secretary of State Alexander Haig advocated supporting Taiwan but in ways that would not alienate Beijing. Haig, influenced by the triangular diplomacy of Henry Kissinger—under whom he had worked in the Ford and Nixon administrations in the 1970s—believed that the United States should subordinate Sino-American disagreements over Taiwan to the strategic imperative of improving cooperation with the PRC against the Soviet Union. Ultimately, Bush and Haig were able to convince the president that a strategic partnership with Beijing was necessary in the confrontation against the Soviet Union.⁴⁶

The first high-level contact between the Reagan administration and Chinese officials took place when Secretary of State Alexander Haig visited China on 14–17 June 1981 to meet with Foreign Minister Huang Hua, Defense Minister Geng Biao, Deng Xiaoping, and Prime Minister Zhao Ziyang.⁴⁷ A key objective of Haig’s visit was to convey “a new conceptual basis for a more durable U.S.- Chinese relationship built upon strategic association, under which the U.S. will treat China as a friendly non-allied country, and to demonstrate this concretely by modifying the restrictive legislation and regulations on exports.”⁴⁸ The major topics discussed by Haig and Huang on the first day of the visit were Taiwan, the means to improve the coordination of U.S. and Chinese policies in Afghanistan and Southeast Asia, and U.S. technology transfers to China.⁴⁹ Haig informed the Chinese that the U.S. government would treat the PRC as a “friendly non-aligned country” entitled to receive increased U.S. technology transfers, and he affirmed Reagan’s desire to suspend the prohibition on arms sales to China.⁵⁰ Although FMS to China were not yet allowed, the United States would henceforth permit the export of lethal equipment on a case-by-case basis.

In late June 1981, shortly after Haig’s visit to China, Reagan issued a directive stating that U.S. technology transfer to the PRC should support “a secure, friendly, and modernized China” and established the so-called two-times policy, thereby significantly broadening the “China Differential.” The

46. Cohen, *America’s Response to China*, p. 226.

47. On Haig’s meeting with Deng Xiaoping, see U.S. Embassy in China, “Meeting with Deng Xiaoping,” Secret, Cable from Secretary of State Alexander Haig to President Ronald Reagan, 16 June 1981, in NSArchive, China and the United States.

48. U.S. Department of State, “Secretary’s Talking Points: U.S.-China Relations,” Secret, Talking Points, 4 June 1981, in NSArchive, China and the United States.

49. U.S. Department of State, “End of Second Day Report—Beijing,” Secret, Cable from Secretary of State Alexander Haig to Deputy Secretary of State William Clark, 16 June 1981, in NSArchive, China and the United States. The cable incorporates the report sent by Haig to the President describing Haig’s discussion with Huang Hua.

50. *Ibid.*; Solomon, *U.S.-PRC Political Negotiations*, p. 85; and U.S. Department of State, “Secretary’s Talking Points.”

United States would allow the approval of equipment and technology at technical levels twice as high as those approved for the USSR before the invasion of Afghanistan.⁵¹ The State Department subsequently removed China from the list of countries denied licenses for arms exports.⁵² In September 1981, the President issued National Security Decision Directive (NSDD) 11, “Munitions/Technology Transfer to the People’s Republic of China,” which stipulated that the case-by-case consideration of requests from the PRC for military/technology transfers should be based on several principles. First, the transfers should minimize the national security risks in the four key areas noted earlier. Second, for requests that would enhance China’s conventional defensive capabilities, the United States would be willing to consider the transfer of weapons, components, technical assistance, and weapons technology, including some licensed coproduction/involving non-sensitive technologies. Third, the transfers should not contribute significantly to improvements in Chinese offensive and power projection capabilities. Finally, requests for items that were not clearly defensive would be permitted on a case-by-case basis through the selective transfer of components and technical assistance rather than the transfer of complete weapons systems or their production technology.⁵³

The decisions taken in 1981 thus cumulatively loosened U.S. dual-use export controls to the PRC and removed the ban on arms supplies to China. However, these policies proved difficult to implement. A U.S. Commerce Department study undertaken in 1982 at the request of Secretary of Commerce Malcolm Baldrige found that the “two-times” policy “was neither clear nor predictable to the involved government agencies.” In fact “the two-times benchmark was not easily applied across the Commodity Control List because in certain areas nothing was allowed to go to the Soviet Union and therefore [the government] had a little difficulty with two times nothing in terms of how do you apply that in making licensing decisions.”⁵⁴ In addition, continued divergences on Taiwan, particularly the issue of arms sales to the island, complicated efforts to improve U.S.-PRC military relations. The Chinese authorities said they were not interested in buying U.S. weapons unless the issue

51. Statement by William Archey, acting assistant secretary of commerce for trade administration, in U.S. Congress, House of Representatives, Committee on Foreign Affairs, Subcommittee on International Economic Policy and Trade, *Controls on Exports to the People’s Republic of China: Hearing*, 99th Cong., 1st Sess., 17 November 1983, p. 2.

52. Yuan, “The Politics of the Strategic Triangle,” p. 62.

53. White House, “Munitions/Technology Transfer to the People’s Republic of China,” National Security Decision Directive (NSDD) 11, 22 September 1981, available at <http://www.reagan.utexas.edu/archives>.

54. Statement by William Archey, p. 2.

of arms sales to Taipei could be settled in a satisfactory way.⁵⁵ A Chinese Foreign Ministry official declared that “we would rather receive no U.S. arms than accept continued U.S. interference in our internal affairs by selling arms to Taiwan.”⁵⁶

By 1982, however, the U.S. government had taken two significant steps to resolve the impasse on Taiwan. On 11 January 1982 the administration announced its decision not to sell either version of the FX advanced fighter to Taiwan (the F-16/J79 and the F-5G), but simply to renew the ten-year agreement to coproduce with Taiwan the F-5E with Northrop Corporation.⁵⁷ On 17 August, senior Chinese and U.S. officials reached an agreement on a joint communiqué that would govern future U.S. arms sales to Taipei. The Sino-American 1982 Joint Communiqué specified that the U.S. government would not carry out a long-term policy of arms sales to Taipei, that U.S. arms sales would not exceed the level of those supplied to Taipei since 1979 in either qualitative or quantitative terms, and that the United States would gradually reduce its arms exports to the island “leading over a period of time to a final resolution.”⁵⁸

The decision on the sale of the FX aircraft to Taiwan and the 1982 communiqué, by temporarily easing tensions with Beijing on the Taiwan problem, facilitated the strengthening of U.S.–China military cooperation. Secretary of State George Shultz visited the PRC on 2–5 February 1983 and met, among others, Deng Xiaoping, Foreign Minister Wu Xueqian, and Defense Minister Zhang Aiping. Zhao and Shultz discussed the key “problems in our relationship, i.e. Taiwan and technology transfer.”⁵⁹ Regarding arms sales to the PRC, Shultz reiterated that the policy “announced by Secretary Haig in June, 1981, has not changed: we are prepared to review any Chinese

55. Kerry Dumbaugh and Richard Grimmett, *U.S. Arms Sales to China*, Report 85-138 (Washington, DC: U.S. Congressional Research Service, July 1985), p. 6.

56. Quoted in James Sterba, “The Shadow of Taiwan Follows Haig to Peking,” *The New York Times*, 11 June 1981.

57. For an analysis of the FX controversy, see Janice Hinton, *The Sale of the FX Aircraft to Taiwan* (Santa Monica, CA: RAND Corporation, 1982).

58. “United States-China Joint Communiqué on United States Arms Sales to Taiwan,” 17 August 1982, available at <http://www.reagan.utexas.edu/archives>. Just after the announcement of the agreement, however, to allay misgivings about the communiqué, President Reagan issued a secret memorandum clarifying that the volume and sophistication of U.S. arms exports to Taiwan would be contingent on the balance of power across the Strait. See excerpts of the memorandum in Shirley Kan, *China/Taiwan: Evolution of the “One China” Policy—Key Statements from Washington, Beijing, and Taipei*, CRS Report for Congress RL30341 (Washington, DC: Congressional Research Service, 24 June 2011), p. 41.

59. U.S. Department of Defense, “China,” Secret, Origin [Deleted] Beijing, from Deputy Assistant Secretary of Defense for East Asia and Pacific Affairs Richard Armitage to Secretary of Defense Weinberger, 4 February 1983, in NSArchive, China and the United States.

requests on the same case-by-case basis as for other friendly nations” and added that “we don’t seek to press weapons, but would like to help where we can, if you are interested.”⁶⁰ Simultaneously, Deputy Assistant Secretary of Defense for East Asia and Pacific Affairs Richard Armitage met separately with his counterparts in the PRC Ministry of Defense to address working-level issues, such as concrete proposals for expansion of routine military-to-military exchanges.⁶¹ The final session of the second day of Shultz’s visit was devoted entirely to a discussion about technology transfers.⁶²

The PRC as a Friendly Non-Allied Country and the Broadening of the “China Differential”

In May 1983 the Reagan administration announced its decision to continue to broaden Sino-American strategic cooperation by further liberalizing U.S. export controls through the elevation of China into Country Group V and the recognition of it as a “friendly, non-allied country” together with most other “friendly countries.”⁶³ Country Group V included Western Europe, India, all of Africa except Libya, several Arab countries, Australia, New Zealand, and Japan.⁶⁴ This group was subject to the most liberal export control regulations among the existing Country Group categories (Z, S, Y, W, Q, T, V, plus the former China-specific Group P established in 1980). The “China Differential” relative to the Soviet Union thus continued to increase.

In conjunction with the shift of China into Group V, the president also established an interagency steering group on technology transfers to the PRC

60. U.S. Department of State, “Your Meeting with Chinese Premier Zhao Ziyang,” Secret, Briefing Memorandum from Assistant Secretary of State for East Asian and Pacific Affairs Paul Wolfowitz to Secretary of State George Shultz, 27 January 1983, in NSArchive, China and the United States.

61. *Ibid.*

62. U.S. Department of Defense, “Asia Trip of SecState,” Secret, Cable from Deputy Assistant Secretary of Defense for East Asia and Pacific Affairs Richard Armitage to Secretary of Defense Caspar Weinberger, 3 February 1983, in NSArchive, China and the United States.

63. See U.S. Department of State, “U.S. Export Controls and China,” *Gist*, November 1989, pp. 1–4; and Statement by Secretary of Commerce Malcolm Baldrige, in U.S. Congress, House of Representatives, Committee on Energy and Commerce, Special Subcommittee on U.S. Trade with China, *U.S. Technology Transfer to China: Hearing*, 99th Cong., 1st Sess., 27 September 1983, p. 4.

64. See U.S. Department of Commerce, “U.S. Technology Transfer Policy toward China,” Letter from Secretary of Commerce Malcolm Baldrige to Secretary of Defense Caspar Weinberger, Secret, 19 August 1983, in NSArchive, China and the United States; and Elizabeth Nimmo, “United States Policy Regarding Technology Transfer to the People’s Republic of China,” *Northwestern Journal of International Law and Business*, Vol. 6, No. 1 (1984), p. 262.

under the direction of the NSC.⁶⁵ Several committees were established, and one, chaired by the Commerce Department, was responsible for compiling new guidelines for U.S. export control policy toward China.⁶⁶ In June 1983 the NSC directed the Joint Chiefs of Staff (JCS) to prepare a report on the various options for U.S. export control policy toward China.⁶⁷ The following month, the JCS issued its classified report, “Assessment of the Risks and Benefits in the Transfer of Advanced Technology and Conventional Arms to China.”⁶⁸ The report, now declassified, underscores the heterogeneous national security interests that Washington balanced in assessing the desired extent of military cooperation with Beijing. The JCS evaluated the consequences of various export control policy options for China’s military capabilities and, in turn, for U.S. relations with the Soviet Union, with the PRC, and with U.S. friends and allies in East Asia. Looking at the likely impact of existing U.S. defense technology transfers on the Sino-Soviet military balance in the 1980s, the report stated that

the new decade will see China slightly improving its defensive capabilities against a land invasion by the Soviet Union. . . . Still, the level of technology embodied in new Chinese weapons will remain appreciably inferior to those of the Soviet Union and will not significantly alter the military balance. In addition, it will take some time, probably not until the mid-1990s, for China to absorb thoroughly any technologies introduced in the 1980s. Chinese power projection capabilities will not be significantly enhanced this decade and probably in the 1990s.⁶⁹

As for the consequences of China defense modernization for U.S. and allied interests in the Asia Pacific, the report stressed that the PLA’s “ground force modernization will not appreciably affect U.S. and allied security interests through the 1990s” because China’s “air power projection is, for practical purposes, limited to tactical fighter range” and “improvements in Chinese naval capabilities are unlikely to have any significant impact on U.S. forces in the region during the remainder of this century. . . . The threat to the United

65. Statement by Malcolm Baldrige, p. 5

66. *Ibid.*

67. Keyser, interview, 18 May 2010; and Henry Levine, interview, Washington, DC, 29 April 2010. (Levine was economic affairs officer in the State Department’s Office of Chinese and Mongolian Affairs, 1986–1988.) The JCS report is also mentioned by Secretary of Commerce Baldrige in a letter to Secretary of Defense Weinberger. See U.S. Department of Commerce, “U.S. Technology Transfer Policy toward China.”

68. U.S. Joint Chiefs of Staff, “Assessment of the Risks and Benefits in the Transfer of Advanced Technology and Conventional Arms to China,” Secret, Memorandum for the Secretary of Defense, 15 July 1983, in NSArchive, China and the United States.

69. *Ibid.*, “Section I—Strategic Assessment,” pp. 23–24.

States is further offset to the extent the U.S. can control the type and rate of technology transferred and monitor improvements.”⁷⁰ The JCS report therefore concluded that U.S. export controls could be liberalized. Nonetheless, “in order to reduce the likelihood of China improving its military capabilities to a level that would threaten U.S. interests, i.e. the Critical Military Capabilities,” the JCS recommended a ban on technology exports in six “Special Mission Areas”: nuclear weapons and delivery systems, intelligence gathering, electronic warfare, antisubmarine warfare, power projection, and air superiority.⁷¹ The number of Special Mission Areas was therefore expanded from the four established in 1981 to six in 1983. Stephen Bryen later explained that U.S. officials had opposed the transfer of antisubmarine warfare capabilities to the PRC because they did not want to “compromise key strategic programs: submarines are a very big part of the nuclear triad, the whole notion of the triad is that these submarines run silent, they are deep, they are stealthy, they are hidden, and they cannot be targeted so that you have a credible nuclear deterrent.” Bryen also stressed that “the U.S. had a particularly important advantage in space, especially in satellites and intelligence gathering, and you did not want to see that compromised. So a lot of the restrictions were focused on the space part.”⁷² The administration thus concluded that “US technology transfer should support China’s technological and economic modernization,” but the new policy must “not alter the U.S.-PRC strategic balance, though the transfer of technology will prevent a widening of the military gap between the PRC and the USSR.”⁷³ Here, too, the U.S. government needed to strike a balance between competing security interests in assessing the desired degree of defense cooperation with China.

The announced revisions to the Export Administration Regulations were published in the *Federal Register* on 23 November 1983.⁷⁴ The new guidelines moved the PRC to Country Group V and established a three-tiered export control system. This tiered system reflected Washington’s assessment of the national security implications of technology exports in each category on U.S. relations with the PRC, with the Soviet Union, and with U.S. allies and friends in Asia. The “Green Zone” included seven commodity categories that represented “minimal national security risk”—namely, computers, computerized instruments, microcircuits, electronic instruments, recording equipment,

70. *Ibid.*, pp. 24, 26, 37, 42.

71. *Ibid.*, “Section III—Special Mission Areas,” pp. 1–7.

72. *Ibid.*

73. Statement by Malcolm Baldrige, p. 5.

74. McKenzie, “China and U.S. Trade,” p. 455.

semiconductor production equipment, and oscilloscope technologies.⁷⁵ Some 75 percent of all license applications for exports to China in 1983 fell in the Green Zone's seven categories, with computers accounting for 41 percent of all license applications to China. The license applications for technologies within this zone would receive expeditious consideration and routine approval by the Commerce Department. The "Yellow Zone" included high-level technologies and required case-by-case review by the Department of Commerce, the Department of Defense, and other agencies. Licenses would be approved unless the commodity or the technology could be demonstrated to prove a "clear threat" to U.S. security interests.⁷⁶ The "Red Zone" included the most sensitive technology areas with direct and significant military applications; namely, those falling in the six Special Mission Areas specified above.⁷⁷ The content of the Red Zone was classified and was not to be disclosed, and licenses for the technologies in this zone had a "strong presumption of denial."⁷⁸

The decision in May 1983 to move China to the country group of most "friendly countries" and the establishment of the three-tiered export control system significantly liberalized U.S. high technology transfers to China, especially in electronics. Nevertheless, the new regulations did not bring export controls toward China in line with those of non-Communist countries. Even though exporters had been hoping for such a change after the May 1983 announcement, China continued to be the only country within Group V subject to national security export controls.⁷⁹ The Reagan administration continued to require national security controls on exports to China and opposed the removal of China from COCOM controls for two main reasons. First, the administration wanted to maintain highly stringent controls on the most sensitive technologies (i.e., those in the Yellow and, especially, the Red Zones) that could enhance China's offensive capabilities vis-à-vis the United States and its friends and allies. Second, in the context of U.S. efforts to counter the Soviet Union, U.S. officials worried that COCOM partners would try to use concessions on export controls to China as a means to obtain liberalization of

75. Statement by William Archey, p. 3.

76. *Ibid.*, p. 4.

77. Bryen, interview.

78. Statement by William Archey, p. 5.

79. China's frustration with the nonconformance of U.S. export controls among countries in Group V, especially for items in the Yellow and Red Zones, was expressed by Premier Zhao during his visit in the United States in 1984. See U.S. Department of State, "Secretary's Meeting with Premier Zhao," Bureau of East Asian and Pacific Affairs, Secret, Memorandum to the U.S. Embassy in China, Secret, January 1984, in NSArchive, U.S. Intelligence and China.

controls vis-à-vis the USSR—a position contrary to the administration’s desire to tighten national and multilateral export controls to the Soviet Union.⁸⁰

When Reagan visited the PRC for the first time on 26–30 April 1984, he told Chinese leaders he did “not believe that there is the necessary consensus among our allies to drop China from COCOM nor do we believe that this course is advisable from the standpoint of security.”⁸¹ He argued that the “liberalization of export controls did not eliminate national security controls or the need for coordination with our Allies. China has capabilities unlike those of any other friendly, non-Allied country, particularly in nuclear weapons.”⁸² Nonetheless, the expansion of the “China Differential” that resulted from the 1983 liberalization of U.S. export controls continued apace in the following years, as the Reagan administration both tightened controls on exports to the USSR and increased technology transfers to the PRC.

The Reagan Administration’s Stance against the USSR and Military Cooperation with China

U.S. export control policy toward China throughout the 1980s stands in sharp contrast to the policy vis-à-vis the Soviet Union and can be understood only by reference to U.S. policies toward Moscow. As outlined in Reagan’s Presidential Security Decision Directive (PSDD) 75, “U.S. Relations with the USSR,” the administration’s goal was “to contain and over time reverse Soviet expansionism by competing effectively on a sustained basis with the Soviet Union in all international arenas—particularly in the overall military balance. . . . This will remain the primary focus of U.S. policy toward the USSR.”⁸³ To do so, the United States, together with its COCOM allies, adopted a two-pronged strategy aimed at maintaining a qualitative edge of Western military equipment in the face of the Soviet Union’s quantitative preponderance. This was to be done not only by investing in military research and development and military production (leap ahead) but also by retaining

80. On the latter point, see *ibid.*

81. U.S. Department of State, “Your China Trip: Setting and Issues,” Secret, Memorandum from Secretary of State George Shultz to President Ronald Reagan, 3 April 1984, in NSArchive, China and the United States.

82. U.S. Department of State, “The Trip of President Reagan to the People’s Republic of China—Talking Points,” Secret, ca. April 1984, in NSArchive, China and the United States.

83. The White House, “U.S. Relations with the USSR,” National Security Decision Directive 75, Top Secret, 17 January 1983, available at <http://www.fas.org/irp/offdocs/nsdd/index.html>.

a national and multilateral system of stringent export controls (keep them behind).

The first pillar of the administration's anti-Soviet strategy was a trillion-dollar defense buildup, the largest in peacetime history, including the procurement of high-visibility systems such as the MX missile, the B-1B bomber, and four new aircraft carriers, as well as the highly publicized launch of the Strategic Defense Initiative in 1983.⁸⁴ Concomitantly, the defense-related share of government spending on research and development grew substantially throughout the 1980s, peaking in 1987 at almost 70 percent.⁸⁵ The second pillar adopted by the administration was the tightening of national and multilateral export controls toward the USSR as a means to protect U.S. investments in advanced defense technologies.⁸⁶ PSDD 75 stressed that the United States wanted "to ensure that East-West economic relations do not facilitate the Soviet military buildup. This requires prevention of the transfer of technology and equipment that would make a substantial contribution directly or indirectly to Soviet military power."⁸⁷ Bryen later recalled the "paradigm" that shaped U.S. export control policy toward the Soviet Union:

We tried to prevent the Soviet military from using Western technology in its systems, taking note that the preponderance of technology that the Soviets needed was electronics, computers, microelectronics, software—all the various elements of electronics—and that spelled the difference between the Soviet military and the American military. We called it quality edge. The thought was that while we would not have as many tanks or airplanes, submarines or battleships—we would never match the numbers that the Soviet Union was producing—ours would be so much better and more capable, that electronics gave us a quality edge, a force multiplier against whatever they could field.⁸⁸

Paul Freedenberg, who served first as assistant secretary of commerce for trade administration and then under secretary of commerce for export administration in the latter half of the 1980s, recently described how the United States adopted an undeclared policy throughout the 1980s aimed at

84. See Jacques Gansler, "Building Reform in Weapons Acquisition," in William Snyder, James Brown, eds., *Defense Policy in the Reagan Administration* (Washington, DC: National Defense University Press, 1988), p. 367.

85. David Mowery, "Plus ça change: Industrial R&D in the 'Third Industrial Revolution,'" *Industrial and Corporate Change*, Vol. 18, No. 1 (2009), p. 30.

86. Mastanduno, *Economic Containment*, p. 267.

87. The White House, "U.S. Relations with the USSR," 1983.

88. Bryen, interview.

keeping the USSR one or two technological generations behind U.S. state-of-the-art technologies:

We tried to keep them a generation or two behind. . . . It was an administration-wide policy. . . . It was not a stated policy, but it was an unstated policy, it was pretty clear. . . . There was no formal beginning to the policy. It became a rule of thumb, based on what the Pentagon felt comfortable with, but you could trace it to the very beginning of the Reagan Administration. . . . The rationale was the same that guided the overall policy on technology transfer: keep the Soviets substantially behind the West in technology, and there was likely to be a benefit with regard to the diminished quality of Soviet weapons systems.⁸⁹

The sharp bifurcation of U.S. export control policy toward Beijing and Moscow, respectively, throughout the 1980s is highlighted by the fact that the notion of “keeping them behind” one or two generations was applied only to the Soviet Union, not to China.⁹⁰ The combined application of the “two generations behind” policy to the USSR and the simultaneous liberalization of controls on defense and dual-use exports to the PRC resulted in the steady expansion of the “China Differential” in favor of the PRC relative to the Soviet Union. PSDD 75 emphasized that “China continues to support U.S. efforts to strengthen the world’s defenses against Soviet expansionism. The U.S. should over time seek to achieve enhanced strategic cooperation and policy coordination with China, and to reduce the possibility of a Sino-Soviet rapprochement.”⁹¹ Simultaneously, the administration embarked on a major effort to tighten U.S. and multilateral export controls on trade with Warsaw Pact countries. U.S. officials sought to expand the control list, bolster the enforcement of controls, tighten the restrictions on scientific communication, and reinforce COCOM’s institutional structure.⁹² As Michael Mastanduno puts it, “by the latter half of the 1980s, it was evident that the multilateral

89. Paul Freedenberg, interview, Washington, DC, 9 March 2010; and Paul Freedenberg, interview, Washington, DC, 22 August 2012. Freedenberg specified that this “unstated policy” “was applied across the board when it was possible to ascertain what a particular generation of technology was (as in the case of semiconductors). But sometimes it was impossible to make that judgment, and the answer would be to endeavor to keep the Soviets behind whatever the U.S. and Western level of technology was, even if it could not be quantified. . . . It was a rule of thumb. What is a generation? It is hard to say. It just meant that we wanted to keep them far back from us rather than just merely behind us in technology.” Ibid.

90. Freedenberg, interview, 22 August 2012.

91. The White House, “U.S. Relations with the USSR.”

92. Mastanduno, *Economic Containment*, pp. 233–241, 266–277.

strategic embargo [on the Soviet bloc] was stronger than it had been during the 1970s.”⁹³

In line with this bifurcated approach to relations with Moscow and Beijing, the Reagan administration continued to loosen defense and dual-use export controls toward the PRC. When Chinese Defense Minister Zhang Aiping was visiting the United States from 9 to 27 June 1984, he and Secretary of Defense Caspar Weinberger signed a military technology cooperation agreement. On 12 July, the U.S. government decided to allow the PRC to receive government-to-government military transfers by making China eligible for FMS, though only on a cash basis.⁹⁴ These sales provided China with a new channel, in addition to dual-use technology imports and commercial arms sales, through which it could acquire U.S. defense-related technology. In addition to arms sales, the United States started cooperating with the People’s Liberation Army (PLA) in planning a Chinese National Defense University (NDU), similar to the one in the United States. The PLA-NDU opened its doors on 1 September 1986, and maintained close ties with its U.S. counterpart throughout the 1980s, including regular exchanges of professors, rotating bilateral conferences, exchanges of library texts and materials, field studies trips, and periodical hosting of research fellows.⁹⁵

COCOM’s Liberalizations and the Establishment of the China Green Line

In 1985–1987, the United States and its COCOM partners markedly loosened controls on exports to China. The liberalization of export controls on the PRC in the early 1980s, coupled with the fact that exports to China were still subject to COCOM review, had led to a dramatic growth in the number of license applications for the PRC. Of the total U.S. license applications submitted to COCOM, the China-related cases grew from approximately 54 percent in 1982 to 95 percent in 1985. For those submitted by other COCOM

93. *Ibid.*, p. 266.

94. The FMS program is the government-to-government method for selling U.S. defense equipment, services, and training. In an FMS sale, the U.S. government, acting as a procurement agent, assists with most aspects of the transaction, such as negotiating the nature and the price of equipment, as well as providing subsequent service. See Dumbaugh and Grimmett, *U.S. Arms Sales to China*, p. 7; and Ross, “China and the United States’ Export Controls System,” pp. 31–32.

95. Kerry Dumbaugh and Larry Nowels, *China-U.S. Cooperation: Military Sales, Government Programs, Multilateral Aid, and Private-Sector Activities*, CRS Report for Congress 89-355, (Washington, DC: Congressional Research Service, 1989), p. 4.

Table 1. COCOM Exceptions Cases, 1983–1986

<i>Cases</i>	<i>1983</i>	<i>1984</i>	<i>1985</i>	<i>1986</i>
Total U.S. Cases	1,882	3,399	3,653	1,469
United States to China	1,502	2,931	3,498	1,271
% of Total U.S. Cases	80%	86%	96%	87%

Source: Statement by Deputy Assistant Secretary of State for International Trade Controls Michael Zakaria, in U.S. Congress, House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, *Technology Transfers to China: Hearing*, 100th Cong., 1st Sess., 3 August 1987, p. 34.

members, the figures grew from 57 percent to 68 percent.⁹⁶ The number of cases submitted to COCOM expanded from 1,028 in 1982 to 4,611 in 1985, which led a backlog of roughly 1,000 China cases in 1984–1985.⁹⁷ In 1985, the U.S. government requested 3,653 exceptions to COCOM, 96 percent of which were for China (see Table 1).⁹⁸

On 27 December 1985, after ten months of negotiations, the backlog of China cases in COCOM spurred the member-states to agree to liberalize the controls on certain products destined for China.⁹⁹ The proposal had been formally submitted to COCOM by the U.S. government in early 1985. The new guidelines divided the controlled categories on COCOM's International Industrial List into three groups, each with specific technical parameters, replicating what the U.S. government had done in 1983 with the creation of the Green, Yellow, and Red Zones.¹⁰⁰ The first group covered 27 product categories that fell under COCOM's new China "Green Line." Items in these 27 categories could be exported to China at "national discretion," without referring the export license application to COCOM for prior approval. The 27 categories consisted mainly of computers, software, instrumentation, telecommunications

96. Yuan, "The Politics of the Strategic Triangle," p. 66.

97. *Ibid.*

98. Statement by Michael Zacharia, Deputy Assistant Secretary of State for International Trade Controls, 1987, in U.S. Congress, House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, *Technology Transfers to China: Hearing*, 100th Cong., 1st Sess., 3 August 1987, p. 34.

99. Ross, "China and the United States' Export Controls System," p. 31. On the U.S. government's concerns over the backlog of China-applications, see the statement by Robert Price, Director of the State Department's Office of East-West Trade, in U.S. Congress, House of Representatives, Committee on Foreign Affairs, Subcommittee on International Economic Policy and Trade, *U.S. and Multilateral Export Controls: Hearing*, 99th Cong., 1st Sess., 13 April 1985, pp. 8–9.

100. Yuan, "The Politics of the Strategic Triangle," p. 66.

equipment, and semiconductor manufacturing.¹⁰¹ The items included in the second group were at an intermediate level of technology and required monthly statistical reports to COCOM. Items in the third group, which essentially encompassed the six Special Mission Areas (mentioned above), required compulsory referral to COCOM and carried a presumption of denial.¹⁰² The U.S. government maintained tight controls on these categories because it did not want to “encourage or support Chinese advances” in military technologies “as they relate to increased offensive military capabilities” vis-à-vis the United States and its partners and allies.¹⁰³ Having established the three groups, COCOM then further liberalized export controls to China in 1986–1987. The additional revisions included adding five categories to the China Green Zone and liberalizing the technical parameters for ten existing categories. By April 1987, the Green Zone had expanded to 32 categories from only seven categories in 1983.¹⁰⁴ The following month, COCOM also liberalized munitions exports to China for thirteen more categories.¹⁰⁵

The rationale for maintaining stringent restrictions on exports for some technology categories while considerably liberalizing controls on others was the conflicting nature of U.S. security interests vis-à-vis China. A formerly secret State Department memorandum from 1986 highlights the point:

US export control policy toward China is designed to balance our desire to support China’s economic modernization with the need to assess the potential adverse effects on the security interests of the U.S. and of our allies. Specifically, our policy is aimed at limiting exports that would make a key contribution to identifiable Chinese military programs in [these] 6 critical mission areas, in a manner that would threaten U.S. national security interests.¹⁰⁶

U.S. officials were willing to increase defense technology exports to and cooperation with China, but only if the exports did not endanger U.S. security interests or the security of U.S. allies and friends.

101. For more details on these categories, see Ross, “China and the United States’ Export Controls System,” p. 31.

102. Yuan, “The Politics of the Strategic Triangle,” p. 67.; and U.S. Department of State, “U.S. Policy Toward China,” Secret, Statement, 30 July 1986, in NSArchive, China and the United States, p. 3.

103. U.S. Department of State, “Transfer of Military Equipment to China (COCOM Aspect),” Bureau of East Asian and Pacific Affairs, Confidential, Testimony—Response to Questions Submitted by Congress, 30 July 1986, in NSArchive, China and the United States.

104. Yuan, “The Politics of the Strategic Triangle,” pp. 57, 67.

105. These categories included small arms and machine guns, large caliber armaments, ammunition, bombs, torpedoes, and rockets; tanks, vehicles, and special armored equipment; defensive equipment for use against toxicological agents; naval vessels and special naval equipment; aircraft and helicopters; and military infrared and thermal-imaging equipment. *Ibid.*, p. 67.

106. U.S. Department of State, “U.S. Policy toward China,” p. 3.

Linkage: China's Missile Proliferation and U.S. Defense Technology Transfers

In late 1987, after several years of a steady, albeit calibrated, increase in U.S. technology transfers to the PRC, the Reagan administration decided that it would temporarily freeze the liberalization of export controls because of China's missile proliferation practices in the Middle East, especially the sale of Chinese-made HY-2 Silkworm anti-ship missiles to Iran and of CSS-2 intermediate range ballistic missiles (IRBMs) to Saudi Arabia. The U.S. decision to link bilateral military cooperation to China's proliferation behavior underscored the tradeoff between U.S. nonproliferation interests and the desire to enhance strategic cooperation with China. Nonproliferation concerns limited the degree of U.S.-PRC military cooperation, bringing to a temporary halt U.S. defense exports to the PRC. The Reagan administration began using the prospects of continued military cooperation as a foreign policy instrument aimed at modifying China's proliferation practices.

On 22 October 1987, the U.S. State Department announced that it would refrain from additional liberalization of technology transfers to the PRC because of the "rising tensions in the Persian Gulf," adding "we consider this an inappropriate time to proceed with our review of further export control liberalization."¹⁰⁷ Earlier in 1987 the United States had begun to reflag and escort Kuwaiti tankers in the Persian Gulf.¹⁰⁸ The decision to halt further liberalization of export controls followed several attacks by Iran with Silkworm missiles on oil tankers in Kuwaiti waters, including several owned by a U.S. company or flying a U.S. flag.¹⁰⁹ According to a U.S. intelligence report dated 15 October 1987, the Liberian-flagged tanker *Sungari*, which was being escorted by U.S. naval vessels, was hit at anchor eight miles off Kuwait's al-Ahmadi oil terminal by an Iranian Silkworm missile, setting it afire from stem to stern.¹¹⁰ On 16 October, the *Sea Isle City*, a U.S.-flagged Kuwaiti oil tanker, was also hit by a Silkworm missile that wounded eighteen crew members.¹¹¹ Declassified State Department documents indicate that the U.S.

107. Molly Moore and David Ottaway, "U.S. Reacts to China's Silkworm Sale; Technology Transfer Delayed," *The Washington Post*, 23 October 1987.

108. Woon, "Chinese Arms Sales and U.S.-China Military Relations," p. 603.

109. Moore and Ottaway, "U.S. Reacts to China's Silkworm Sale."

110. U.S. Department of State, "Persian Gulf: Fourth Time Lucky for Iranian Silkworms at Kuwait," Bureau of Intelligence and Research, Secret, Intelligence Report, 15 October 1987, in NSArchive, China and the United States.

111. "Ship Flying U.S. Flag Hit; 18 Wounded," *St. Petersburg Times* (Florida), 17 October 1987.

government was concerned by the adverse consequences of Chinese missile exports to Iran on U.S. shipping in the Strait of Hormuz, on the Iran-Iraq War, and on the overall stability of the Middle East.¹¹² During visits to China in July and September 1988, Secretary of State Shultz and Secretary of Defense Frank Carlucci reiterated their concerns over the potentially destabilizing consequences of China's arms exports, "especially to volatile regions such as the Middle East."¹¹³ The administration decided to make the further liberalization of U.S. export controls dependent on China's proliferation practices. Although U.S. officials provided "assurances about continued long-term U.S. support for China's modernization," they told their Chinese counterparts that "the presence of Chinese-made weapons in the Gulf [has] seriously undermined political support in Congress and the Administration for further relaxation of restrictions on technology transfers to China. For PRC policymakers, the linkage between tech transfer and arms sales is clear and unambiguous."¹¹⁴ When Chinese Foreign Minister Wu Xueqian visited the United States in March 1988, he offered private assurances that China would impose a "moratorium on deliveries of anti-ship missiles to Iran."¹¹⁵ By agreeing to end the sale of Silkworm missiles to Iran and to prevent the diversion of such missiles from third countries such as North Korea, the Chinese hoped to gain renewed liberalization of U.S. export controls.¹¹⁶ In exchange, U.S. officials announced the resumption of the export control liberalization. By May 1988 the State Department considered that "to date, steps PRC has taken to ensure that additional Chinese anti-ship missiles do not reach Iran have been effective."¹¹⁷

112. For details, see U.S. Department of State, "Chinese Arms Trade with Iran," Secret, Cable to the U.S. Embassy in China, 21 May 1987, in NSArchive, China and the United States; and U.S. Department of State, "Chinese Arms Sales to the Middle East," Bureau of East Asian and Pacific Affairs, Talking Points, Secret, 2 May 1988, in NSArchive, China and the United States.

113. U.S. Department of State, "Ballistic Missiles/Arms Sales by the PRC," Classification Unknown, Talking Points, ca. September 1988, in NSArchive, China and the United States. This document, although dated approximately September 1988, is more likely to have been written in 1989 given that it refers to Shultz's and Carlucci's visits "last year" to the PRC.

114. U.S. Embassy in Beijing, "Background Statement on U.S. Export Control Policy toward China," Confidential, Cable to the State Department, 18 December 1987, in NSArchive, China and the United States. See also U.S. Department of State, "Export Control Liberalization for China," Bureau of East Asian and Pacific Affairs, Classification Unknown, Press Guidance, 23 October 1987, in NSArchive, China and the United States.

115. U.S. Department of State, "Chinese Arms Sales to the Middle East," 1988.

116. Bates Gill, "Two Steps Forward, One Step Back: The Dynamics of Chinese Nonproliferation and Arms Control Policy-Making in an Era of Reform," in David Lampton, ed., *The Making of Chinese Foreign and Security Policy in an Era of Reform* (Stanford, CA: Stanford University Press, 2001), p. 268.

117. U.S. Department of State, "Chinese Arms Sales to the Middle East."

A further source of proliferation concern for the administration came in 1988 when U.S. intelligence learned that the Chinese had transferred CSS-2 (or Dong Feng 3, DF-3) missiles to Saudi Arabia.¹¹⁸ U.S. officials were concerned that “the sale of CSS-2 IRBMs to Saudi Arabia is the first export of a missile with this range (up to 3,000 km) to the Third World.”¹¹⁹ The sales provided Saudi Arabia with the longest-range missile systems deployed by any country other than the five permanent members of the UN Security Council. The details of the CSS-2 contract were negotiated in Hong Kong in December 1986 by Saudi and Chinese senior military officials.¹²⁰ According to JCS reports, the missiles were delivered in the latter half of 1987, and at the end of January 1988 China started assisting Saudi Arabia in constructing CSS-2 launch sites.¹²¹ During Wu’s visit to the United States in March 1988, U.S. officials pressed him on the CSS-2 deal. The Chinese foreign minister responded that the CSS-2 missiles had been modified and were not nuclear-capable.¹²² However, U.S. State Department officials’ concerns were not allayed by China’s assurances, and the administration believed there was “a danger to international stability inherent in continued sales of missile technology and missile delivery systems” to the Middle East.¹²³ A few weeks later, Secretary of State Shultz wrote a private letter to Wu emphasizing U.S. concerns “both with the implications which Chinese missile transfers have for peace and stability in the region and for the broader implications for international stability of transfers of this class of weapons.”¹²⁴

An agreement was finally reached in September 1987 during Carlucci’s visit to China. A declassified State Department document indicates that Chinese leaders gave private assurances to Carlucci that China would “take a prudent and responsible attitude regarding weapons sales, including the sale

118. Evan Medeiros, *Reluctant Restraint: The Evolution of China’s Nonproliferation Policies and Practices, 1980–2004* (Stanford, CA: Stanford University Press, 2007), p. 104.

119. U.S. Department of State, “Chinese Arms Sales to the Middle East.”

120. Medeiros, *Reluctant Restraint*, pp. 104, 106.

121. See U.S. Joint Chiefs of Staff, “[Excised] Export of the CSS-2 to Saudi Arabia,” Classification Unknown, Intelligence Information, 29 April 1988, in NSArchive, China and the United States; and U.S. Joint Chiefs of Staff, “[Excised] Export of the Improved Dongfang 3S to Saudi Arabia,” Classification Unknown, Intelligence Information Report, 28 June 1988, in NSArchive, China and the United States.

122. Medeiros, *Reluctant Restraint*, p. 107.

123. U.S. Department of State, “Chinese Arms Sales to the Middle East.”

124. U.S. Department of State, “Chinese Missile Transfers to Saudi Arabia,” Secret, Testimony, 20 April 1988, in NSArchive, China and the United States. See also U.S. Department of State, “Chinese Sale of Missiles to Saudi Arabia: Letter to PRC Foreign Minister,” Secret, Action Memorandum, 26 March 1988, in NSArchive, China and the United States.

of missiles.”¹²⁵ After the meetings with Chinese leaders, Carlucci stated that he was “fully satisfied with their statements that China takes a prudent approach to arms sales.”¹²⁶ He added, “these had been the best discussions that we have had with the Chinese on this issue.”¹²⁷ In the Great Hall of the People, Deng and Carlucci also discussed the prospects for the launch of U.S. satellites on China’s Long March launchers.¹²⁸ The day after Deng gave his assurances to Carlucci, the Reagan administration announced it would grant export licenses for satellites manufactured by Hughes Aircraft and scheduled to be launched for Australian and Hong Kong companies on China’s Long March launchers. The Hong Kong–based AsiaSat was to put a satellite in orbit in 1989, and AusSat from Australia would launch two satellites using the Chinese service in 1991 and 1992.¹²⁹ Lincoln Bloomfield, who, as a senior Department of Defense official, was part of the U.S. delegation with Carlucci, Assistant Secretary of Defense Richard Armitage, and U.S. Ambassador to the PRC Winston Lord, later outlined the rationale behind the agreement to launch U.S.-made satellites on Long March vehicles. Bloomfield contended that after the 1986 explosion of the Space Shuttle Challenger, the United States could not make many launches per year and therefore had “a strategic gap, we did not have launch services.” This gap created an incentive to seek access to the Chinese launchers. In addition, the U.S. government “had a strategic desire to persuade China not to proliferate missiles to the Middle East.” The agreement was also symbolically important in highlighting the expansion of Sino-American security and economic cooperation.¹³⁰

The final attempt of the decade to liberalize defense technology transfers to the PRC was made in 1988/early 1989, prior to the Tiananmen Square

125. U.S. Department of State, “Ballistic Missiles/Arms Sales by the PRC.” Another secret briefing paper compiled by the State Department indicates that Deng Xiaoping told Frank Carlucci that “*except for Saudi Arabia*, China will not provide intermediate missiles to any country.” See U.S. Department of State, “President’s Meeting with Yang Shangkun,” Secret, Briefing Paper, 8 February 1989, available at <http://www.gwu.edu/~nsarchiv/NSAEBB>; emphasis added.

126. U.S. Arms Control and Disarmament Agency, “Missile Proliferation,” Classification Unknown, Testimony, ca. September 1988, in NSArchive, China and the United States (the quoted sentence is handwritten on the document).

127. U.S. Department of State, “Background on Chinese Missile Sales,” Secret, Cable, 29 September 1988, in NSArchive, China and the United States.

128. Lincoln Bloomfield, interview, Washington, DC, 4 October 2010. Bloomfield was principal deputy assistant secretary of defense for international security affairs (1988–1989).

129. Jim Abrams, “Agreement on Missiles, Satellites Highlight Carlucci Visit,” Associated Press, 10 September 1988.

130. Bloomfield, interview. For details on the establishment of the U.S.-China space cooperation agreement, see Hugo Meijer, *Trading with the Enemy: The Making of U.S. Export Control Policy toward the People’s Republic of China*, Ph.D. Diss., Institut d’Études Politiques, Sciences Po, Paris, 2013, ch. II.2.

crackdown in June. Christopher Hankin, deputy assistant secretary of state for international trade controls (1988–1994) and a lead negotiator for the U.S. government in COCOM, explains that the United States made a proposal to COCOM for the establishment of a “China Core List” that would have further reduced the scope of multilateral export controls, thereby liberalizing controls beyond the existing “China Differential.” COCOM’s executive committee agreed to work on such a proposal in October 1988. The proposal was then endorsed during the January 1989 COCOM’s high-level meeting. In July of that year, however, when the People’s Liberation Army violently quelled the peaceful mass demonstrations in Tiananmen Square, the U.S. proposal to COCOM was dropped.¹³¹

Characterizing U.S. Dual-Use and Weapons Exports to China in the 1980s

The analysis presented here has shown how U.S.-PRC military relations steadily deepened during the last decade of the Cold War. As a consequence of the successive liberalizations of U.S. export controls, U.S. exports of arms and dual-use technologies grew in volume and sophistication. Meticulous scrutiny of the content of U.S.-PRC military cooperation brings to light the key trends that characterized U.S. arms sales and dual-use exports to China and thereby enriches the understanding of the factors that shaped Sino-American military cooperation in the last decade of the Cold War.

U.S. exports of advanced technology to China rose from \$630 million in 1982 to \$1.7 billion in 1988 (see Table 2). During the same period, the value of U.S. export licenses approved for China grew from \$500 million to \$2.9 billion (see Table 3). In just the first half of the 1980s, from 1982 to 1986, U.S. exports of telecommunications equipment to the PRC grew by nearly 300 percent, reaching \$66 million; exports of precision instruments grew by 400 percent to \$257 million; and exports of computers grew by more than 1,200 percent to \$194 million. Consequently, as stressed by Deputy Assistant Secretary of Commerce Melvin Searls in 1987, the United States “captured a substantial portion of the Chinese market in many high technology areas.” U.S. firms supplied 53 percent of China’s total imports of computers and related equipment and 47 percent of China’s measuring and controlling equipment imports. In 1986, computers, aircraft, precision instruments, electronic circuit manufacturing, and telecommunications equipment made up approximately

131. Christopher Hankin, interview, Washington, DC, 1 December 2010.

Table 2. U.S. Advanced Technology Exports to China, 1982–1988

<i>Year</i>	<i>Total Value in \$ Billion</i>
1982	\$0.63
1983	\$0.65
1984	\$0.82
1985	\$1.71
1986	\$1.28
1987	\$1.43
1988	\$1.72

Source: U.S. Department of State, "US Export Controls and China," *Gist*, November 1989, p. 7.

Table 3. U.S. Export Licenses Approved for China, 1982–1988

<i>Year</i>	<i>Number of Applications</i>	<i>Total Dollar Value (billion)</i>
1982	2,020	\$0.5
1983	2,834	\$0.9
1984	4,443	\$2.0
1985	8,637	\$5.5
1986	6,157	\$3.4
1987	5,777	\$2.3
1988	5,724	\$2.9

Source: U.S. Department of State, "US Export Controls and China," *Gist*, November 1989, p. 7.

80 percent of the total value of all approved individual validated export licenses for China.¹³² Electronics as a percentage of total U.S. exports to China rose from 3 percent in 1980 to 12 percent in 1988 (with a peak of 23 percent in 1986).¹³³ By 1988, the United States allowed the sales of computers ten

132. Statement by Deputy Assistant Secretary of Commerce Melvin Searls, in U.S. Congress, House of Representatives, Committee on Energy and Commerce, Subcommittee on Oversight and Investigations, *Technology Transfer to China: Hearing*, 100th Cong., 1st Sess., 3 August 1987, p. 27.

133. Harding, *A Fragile Relationship*, Appendix A, Table A-4: Commodity Composition of U.S. Exports to China, 1971–1990, p. 366.

Table 4. Licenses and License Values of U.S. Commercial Arms Transfers to China, 1982–1986

<i>Fiscal Year</i>	<i>Licenses Issued (no.)</i>	<i>License Value (in \$ thousand)</i>
1982	28	185
1983	47	71.459
1984	109	82.994
1985	154	286.418
1986	163	79.527
Total	501	520.583

Source: Henri Kenny, “Underlying Patterns of American Arms Sales to China,” in U.S. Arms Control and Disarmament Agency, *World Military Expenditures and Arms Transfers—1986* (Washington, DC: U.S. Government Printing Office, 1987), p. 64.

times more powerful to the PRC than to the USSR.¹³⁴ Dual-use information technology thus loomed large in overall U.S. technology transfers to China in the 1980s.

Arms sales to the PRC also grew throughout the decade as a result of the relaxation of U.S. export controls. By the late 1980s, significant weapons purchases by the PRC, through both commercial arms transfers and FMS, included: 24 Sikorsky S-70 helicopters, 5 General Electric LM-2500 gas turbine engines for two naval destroyers, 6 Boeing Chinook helicopters, AN/TPQ-37 artillery-locating radars, avionics equipment to modernize 50 F-8 interceptor aircraft (the so-called Peace Pearl program), Hughes I-TOW anti-tank and I-Hawk anti-air missiles, Mark-46 Mod 2 anti-submarine warfare torpedoes, Phalanx close-in weapons systems, and the Large Caliber-Ammunition Modernization program.¹³⁵ Nonetheless, a characteristic of U.S.-China arms transfers in the 1980s is that, overall, the PRC preferred to acquire technology rather than large quantities of weapons systems. The majority of the more than 500 licenses for commercial exports from 1982 through 1986 (see Table 4)

134. Statement by Eugene McAllister, Assistant Secretary of State for Economic and Business Affairs, in U.S. Congress, House of Representatives, Committee on Science, Space, and Technology, *The Administration’s Decision to License the Chinese Long March Launch Vehicle: Hearing*, 100th Cong., 2nd Sess., 23 and 27 September 1988, p. 2.

135. This list is based upon Dumbaugh and Nowels, *China-U.S. Cooperation*; Shirley Kan, *U.S.-China Military Contacts: Issues for Congress*, CRS Report for Congress RL32496 (Washington, DC: Congressional Research Service, 2009); Kenny, “Underlying Patterns of American Arms Sales to China”; Ross, “China and the United States’ Export Controls System”; Woon, “Chinese Arms Sales and U.S.-China Military Relations”; and Yuan, “The Politics of the Strategic Triangle.”

involved the transfer of technical data, components of combat or combat support equipment, or a single item or a few items. Large-quantity purchases of sophisticated weaponry were fewer.¹³⁶ A declassified 1985 report produced by the U.S. Defense Intelligence Agency (DIA) on China's imports of foreign technology explains that although the training of Chinese students abroad and the improvement of Chinese science through cooperation and exchanges with foreign countries had a major long-term effect, the more immediate and short-term improvements in the 1980s were the result of commercial transactions, including purchases from foreign corporations, joint ventures, and consulting and industrial training.¹³⁷ The report further stresses that

China's present policy is to maximize the flow of foreign technology. . . . China tries to import only what it cannot produce for itself and to limit imports to advanced technology and key equipment. In general the plan is to import technology that is as advanced as possible, yet still suitable to Chinese conditions. . . . The emphasis is on raising the technical level of existing enterprises rather than importing complete plants or equipment. . . . Whenever possible, China will attempt to acquire technology and know-how rather than finished products.¹³⁸

Furthermore, as illustrated in Table 5, the overwhelming majority of U.S. arms deliveries to China were commercial, although government-to-government sales grew after 1984, when China became eligible for FMS. The overall volume of U.S. arms transfers to the PRC remained relatively small throughout the 1980s, with a total of approximately \$106 million in 1989 (see Table 5). The limited amount of U.S. arms shipments to China was partly attributable to the U.S. government's desire to restrict sales of critical military technologies that could adversely affect U.S. security interests in Asia or U.S. relations with Moscow. In addition, this relatively small volume can be attributed to several factors. Major financial constraints circumscribed the ability of the PRC to purchase expensive weapons systems. In the aftermath of the Cultural Revolution and after the disastrous border war with Vietnam in 1979, the PLA's serious deficiencies had become all too evident, prompting Deng to decry it as a bloated and inefficient force.¹³⁹ Furthermore, throughout the 1980s, defense modernization ranked fourth in priority in China's "four modernizations" program, after the development of agriculture, industry, and science

136. Kenny, "Underlying Patterns of American Arms Sales to China," p. 63.

137. U.S. Defense Intelligence Agency, *China's Import of Foreign Technology, Survey and Chronology: 1 January–31 December*, Classification Unknown, Defense Intelligence Estimate, August 1985, p. 2.

138. Ibid.

139. Tai Ming Cheung, *Fortifying China: The Struggle to Build a Modern Defense Economy* (Ithaca, NY: Cornell University Press, 2009), pp. 54–55.

Table 5. U.S. Arms Deliveries to the PRC, 1981–1990 (thousands of current U.S. dollars)

<i>Fiscal Year</i>	<i>Commercial Deliveries</i>	<i>Government-to-Government Deliveries</i>	<i>Total</i>
1981	0	Not eligible	0
1982	1,000	Not eligible	1,000
1983	209	Not eligible	209
1984	8,037	6	8,043
1985	46,247	424	46,671
1986	55,243	547	55,790
1987	33,933	3,881	37,814
1988	48,891	39,122	88,013
1989	16,415	89,800	106,215
1990	3,615	0	3,615

Source: Harry Harding, *A Fragile Relationship: The United States and China since 1972* (Washington, DC: Brookings Institution Press, 1992), Appendix 11-A (based on the annual reports of the U.S. Defense Security Assistance Agency, *Foreign Military Sales, Foreign Military Construction Sales, and Military Assistance Facts*).

and technology. As a result, China's defense expenditures shrank considerably in the late 1970s and 1980s. The army's share of the national budget declined from 17.5 percent (22.3 billion yuan) in 1979 to 8.3 percent (20.4 billion yuan) by 1987, representing an average 7 percent annual decrease.¹⁴⁰ The U.S. congressional Office of Technology Assessment issued a report in 1987 that acknowledged China "cannot afford to buy many weapons systems. Acquiring modern weapons would be the fastest way to a modernized military, but China does not feel the need to be pressing enough to sacrifice its economic priorities. Instead, it prefers to import technology rather than equipment."¹⁴¹

When purchasing weapons, China often focused on lower-cost U.S. excess military equipment. Andrew Semmel, who helped to oversee FMS programs when working for the Defense Security Assistance Agency (DSAA) from 1981 to 1985, later recalled that "the thing that really caught their eye was the fact that the U.S. had a lot of excess military equipment that was no longer necessary to fill out our combat inventories and that these items were generally

140. Tai Ming Cheung, "Disarmament and Development in China: The Relationship between National Defense and Economic Development," *Asian Survey*, Vol. 28, No. 7 (1988), p. 771.

141. U.S. Congress, Office of Technology Assessment, *Technology Transfer to China*, OTA-ISC-340 (Washington, DC: U.S. Government Printing Office, July 1987), p. 10.

available for sale and transfers at usually reduced prices. The Chinese were very interested because it was basically a discount price that they could get.”¹⁴² China’s limited ability to absorb advanced technologies also constrained the type and volume of its imports of advanced technology. According to the DIA,

China’s ability to assimilate technology is limited by such factors as shortage of skilled manpower, inadequate management, an economic structure marked by a high degree of compartmentalization and duplication, and a low degree of exchange between enterprises. . . . Diffusion of knowledge between enterprises is very rare. The absence of standardization within and between enterprises hinders the integration of up-to-date imported technology.¹⁴³

China’s struggle between, on the one hand, greater exchanges with the West to acquire advanced technologies and, on the other hand, the maintenance of a degree of self-reliance to avoid becoming overly dependent on foreign sources of technology was a further factor constraining China’s weapons imports.¹⁴⁴

As a consequence of the multiple and competing considerations that shaped U.S. military relations with China, coupled with the PRC’s domestic constraints, the key trends that characterized the bilateral strategic cooperation in the 1980s were bilateral strategic cooperation in the 1980s, rapidly expanding sales of dual-use technologies, increasingly frequent military visits, and a relatively limited volume of arms sales.¹⁴⁵

Tiananmen Square and the Demise of U.S.-China Military Cooperation

U.S.-China military cooperation ended abruptly in the aftermath of the PLA’s brutal crackdown on peaceful student demonstrations in Tiananmen Square in June 1989 and the subsequent imposition of U.S. sanctions. On 5 June, to express U.S. condemnation of the PRC’s actions, the Bush administration imposed an initial series of sanctions including the suspension of arms sales to the PRC and the postponement of all high-level military-to-military contacts.¹⁴⁶ The moratorium on arms sales to China affected several major

142. Andrew Semmel, interview, Washington, DC, 24 November 2010. The DSAA was later renamed the Defense Security Cooperation Agency.

143. U.S. Defense Intelligence Agency, *China’s Import of Foreign Technology*, p. 4.

144. Kenny, “Underlying Patterns of American Arms Sales to China,” p. 64.

145. On this point, see also U.S. Congress, Office of Technology Assessment, *Technology Transfer to China*, p. 173.

146. Dianne Rennack, *China: U.S. Economic Sanctions*, Congressional Research Service Report for Congress 96-272 (Washington, DC: U.S. Government Printing Office, 1 October 1997), p. 16.

FMS programs.¹⁴⁷ On 20 June, a second set of sanctions was announced, including postponement of all further lending to China by international financial institutions and suspension of all official exchanges above the level of assistant secretary. Members of Congress from across the political spectrum called for the imposition of harsher penalties. A battle ensued between the executive branch and Congress. Both Democrats and Republicans criticized the administration for being too cautious, and bipartisan support for tougher measures against the PRC increased.¹⁴⁸ The administration attempted to resist congressional pressure and to maintain open communication channels with Beijing to avoid jeopardizing long-term U.S. strategic interests.¹⁴⁹ President Bush sent National Security Adviser Brent Scowcroft and Deputy Secretary of State Lawrence Eagleburger on a secret trip to China to meet with Chinese leaders to express U.S. disapproval of the Tiananmen crackdown but also to convey the president's firm desire to avert a profound deterioration of U.S.-China relations.¹⁵⁰

Congress passed a comprehensive sanctions amendment to the Foreign Relations Authorization Act for fiscal years (FY) 1990 and 1991, introduced on 21 November 1989 and signed by Bush on 16 February 1990. The amendment required the administration to continue the suspension of munitions and crime control equipment exports to China, as well as exports of U.S. satellites intended for launch by a Chinese launch vehicle unless the president reported to Congress that it was in U.S. national security interests to terminate such a suspension. The amendment also required the suspension of licenses

147. The affected programs included the \$27.34 million Large Caliber Ammunition Modernization Program; the \$60.87 million sale of four AN/TPO-27 "Firefinder" radars, support equipment, and training; the \$8.6 million sale of four Mk46-MOD 2 torpedoes, support equipment, spares, and training; and the \$50.2 million F-8 Peace Pearl modernization program to develop, test, and produce 55 upgrade fire control system kits and deliver them to the PRC to install in its F-8 aircraft. See U.S. Department of State, "U.S. Sanctions against China," Secret, Background Paper, ca. October 1993, in NSArchive, China and the United States. By 1989, production on the Peace Pearl program had not begun and, because of major cost overruns, China decided to terminate the project. See Thomas Wilborn, *Security Cooperation with China: Analysis and a Proposal*, SSI Monographs (Carlisle Barracks, PA: Strategic Studies Institute of the U.S. Army War College, 1994), p. 7.

148. Harding, *A Fragile Relationship*, pp. 226, 230–234. See also David Skidmore and William Gates, "After Tiananmen: The Struggle over U.S. Policy Toward China in the Bush Administration," *Presidential Studies Quarterly*, Vol. 27, No. 3 (1997), pp. 520–525; and Robert Suettinger, *Beyond Tiananmen: The Politics of U.S.-China Relations, 1989–2000* (Washington, DC: Brookings Institution Press, 2003), pp. 63–70, 83–87.

149. See Statement by Lawrence Eagleburger, in U.S. Congress, House of Representatives, Committee on Foreign Relations, *United States Policy Toward China: Hearing*, 101st Cong., 2nd Sess., 8 February 1990.

150. Harding, *A Fragile Relationship*, p. 228. After the first trip in early July, Eagleburger and Scowcroft went to China for a second visit on 9 December 1989.

for export to China of goods or technology that could be used for nuclear explosive purposes unless the president certified that China was not assisting any non-nuclear country to acquire nuclear explosive devices or materials.¹⁵¹ The legislation further stipulated that the president should arrange with governments participating in COCOM to suspend any liberalization and to oppose any further liberalization of controls on exports of goods and technology to China.¹⁵² The Tiananmen sanctions, by imposing an arms embargo and stringent restrictions on dual-use trade with the PRC, reflected the sharpest deterioration of Sino-American ties since the establishment of diplomatic relations a decade earlier and brought to an end U.S.-China military cooperation.

Conclusions

In the last decade of the Cold War, U.S. export control policy toward Beijing and Moscow bifurcated. On the one hand, the United States adopted a two-pronged strategy (the so-called “leap ahead” and “keep them behind” approach) aimed at maintaining a U.S. qualitative edge in advanced defense technology in the face of Soviet quantitative superiority. Major investments in defense research and development, coupled with the tightening of national and multilateral export controls, were intended to keep the USSR two generations behind U.S. state-of-the-art technology. On the other hand, in the context of the strategic triangle, the United States consistently increased the volume and sophistication of defense and dual-use transfers to the PRC to strengthen China’s defenses against a Soviet attack, to gain greater leverage in U.S. relations with the USSR, and to induce restraint in Moscow’s foreign policy. The U.S. government adopted the “two-times” policy (i.e., the transfer to China of technology twice as sophisticated as that exported to the Soviet Union) and then established the Green Zone to facilitate the routine approval of defense-related exports to China. Subsequently, the United States allowed commercial and then government-to-government arms sales to the PRC; pressed for and obtained the liberalization of COCOM multilateral controls; and even attempted to establish a “China Core List” in COCOM just a few months before the Tiananmen Square crackdown in 1989. These decisions steadily widened the “China Differential,” a differential that, unlike in the 1950s (when China received harsher treatment), entailed preferential export control treatment for China in comparison to the Soviet Union.

151. This point refers to the prospects of U.S. civilian nuclear exports to the PRC, envisaged by the U.S.-China nuclear cooperation agreement signed in 1985 (but implemented only in 1998 after President Bill Clinton signed the required certifications on China’s nuclear nonproliferation behavior).

152. *The Foreign Relations Authorization Act*, FY1990 and FY1991, H.R. 1487, P.L. 101-246.

Throughout the decade, U.S. defense-related exports to China expanded significantly. However, on the basis of declassified documents and first-hand testimony, this article has shown that the degree of U.S.-China military cooperation did not simply reflect Washington's desire to use the "China card" against Moscow. Bilateral cooperation was contingent on and partially constrained by the PRC's limited ability to acquire and absorb advanced weapons systems. Moreover, the United States faced subtle tradeoffs because it needed to balance heterogeneous and conflicting national security interests in defense technology transfers to the PRC, something that has been largely slighted in the existing literature.

Despite the growth of U.S.-China military cooperation vis-à-vis the Soviet Union, Washington carefully hedged and calibrated its defense technology exports to avoid bolstering China's offensive capabilities vis-à-vis the United States and its friends and allies in the Asia-Pacific region and to avoid damaging U.S.-Soviet diplomatic relations. This is why the U.S. government established the Yellow and Red Zones and continued to prevent the export of what it defined as Critical Military Capabilities—namely, the technologies falling into Special Mission Areas. These areas were even expanded from four to six in 1983 (and then included in the Red Zone) to cover power projection and air superiority along with the earlier categories of nuclear weapons and delivery systems, intelligence gathering, electronic warfare, and anti-submarine warfare. Furthermore, when U.S. interests were threatened by China's proliferation behavior in the Middle East, Washington adopted a carrot-and-stick approach and explicitly linked further military cooperation to Beijing's proliferation behavior. Accordingly, nonproliferation interests also loomed large in the U.S. decision-making process. The range of national security considerations that shaped U.S. military relations with the PRC was therefore more complex, more heterogeneous, and broader than merely enhancing China's military capabilities vis-à-vis the Soviet Union.

This unprecedented era of U.S.-PRC military cooperation came to an abrupt end in June 1989. As Robert Suettinger puts it, the Tiananmen crack-down and the subsequent U.S. sanctions "dealt an enormous setback to bilateral relations between the United States and China—a setback from which, in some ways, they have never recovered."¹⁵³

Acknowledgments

The author is grateful to Federico D'Onofrio, Thomas Dodman, Clément Therme, and Marco Wyss for their comments on earlier drafts of this article.

153. Suettinger, *Beyond Tiananmen*, p. 85.