Journal of Global History (2025), 1–21
doi:10.1017/S174002282500004X

CAMBRIDGE UNIVERSITY PRESS

ARTICLE

Computers for China: Technology Trade and the Transformation of the Cold War in East Asia, 1968-80

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Abstract

This article explores how multilateral negotiations for technology trade accelerated the fall of the Cold War economic divide in East Asia. Drawing on archival sources in Japan, the United States, China, Britain, and France, it focuses on computer trade between China and capitalist countries from 1968 to 1980. The computer, a dual-use technology essential to China's industrial and military modernisation, was at the centre of debate among capitalist countries. While competing to export advanced technologies to the China market, they needed to relax export controls through the Coordinating Committee for Multilateral Export Controls, an international regime to oversee export restrictions on communist countries during the Cold War. This combination of competition and cooperation weakened the restrictive trade regime dating back to before the Korean War, enabling capitalist countries with diverse economic and security interests to find common ground to sell to Chinese customers. By examining this process, this article reveals that dual-use technologies, often viewed in global history as a source of division among states, could in fact promote economic and political interactions across the East-West divide.

Keywords: global capitalism; China; the capitalist bloc; computer; the Cold War

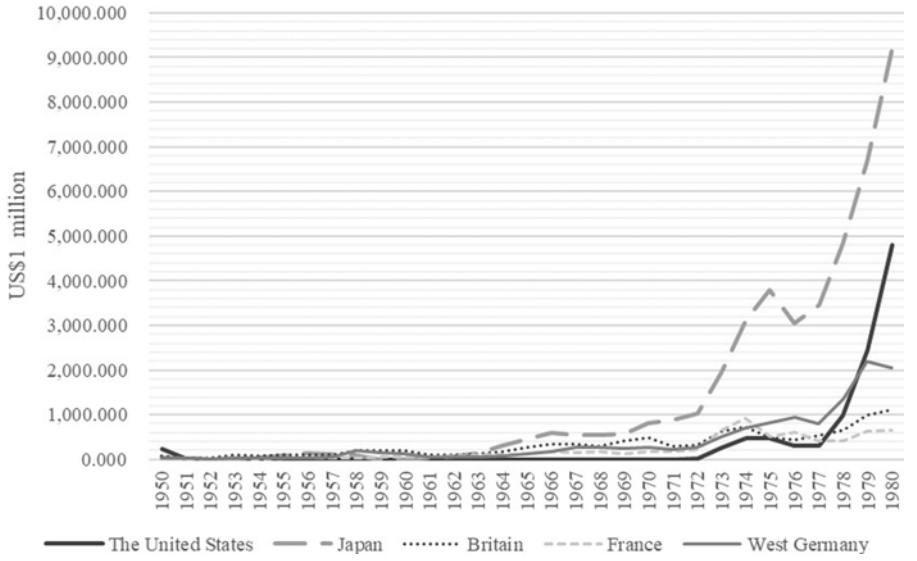
Introduction

On 19 July 1974, the Japanese newspaper *Yomiuri Shimbun* ran a business report titled 'Computers for China: Western Europe Leads, Japan Chases'. It read: 'Computer manufacturers worldwide, including International Business Machines (IBM) in the United States and Fujitsu in Japan, were eager to trade with China'.[1] Scenes like this became increasingly common as China, newly open to the capitalist bloc, emerged as a coveted market in global trade in the early 1970s.[2] On 14 April 1971, US President Richard Nixon lifted the total embargo on China and permitted US exports of non-strategic goods as part of his efforts for the US-China rapprochement, which would culminate in his visit to China in February 1972.[3] Soon enough, the United States and its allies, including France, Britain, West Germany, and Japan, were racing to sell the Chinese almost everything, including computers—the 'last fort' of the capitalist bloc's embargo list, according to

[1]'Densanki, Chugoku Nerau, Seio Ga Senko, Nihon Mo Kyutsui (Computer, Targeting China, Western Europe Take First, Japap Quickly Follows)', *Yomiuri Shimbun*, 19 July 1974, 2.

[2]'The capitalist bloc' and 'capitalist countries' used in this article are meant to signify the United States and its allies during the Cold War, which supported the capitalist economy and opposed the political systems and foreign policies of communist countries like the Soviet Union and the People's Republic of China (PRC).

[3]Henry A. Kissinger, 'National Security Decision Memorandum 105: Steps towards Augmentation of Travel and Trade between the People's Republic of China and the United States', 13 April 1971, Box H-208, National Security Council (hereafter, NSC) Institutional Files, Richard Nixon Library (hereafter, RNL).



Graph 1. Trade Volume between China and Major Capitalist Countries, 1950-80. Source: Data from Zhongguo Duiwai Jingji Maoyi Nianjian Editorial Board, *Zhongguo Duiwai Jingji Maoyi Nianjian 1984* (1984 Yearbook for Foreign Economy and Trade of China), (Zhongguo Duiwai Jingji Maoyi Chubanshe, 1984), IV-19, IV-57-8, IV-67, IV-82.

Yomiuri Shinbum. As Graph 1 suggests, the trade volume between China and capitalist countries skyrocketed in the 1970s, highlighting the potential of China to reposition itself from a peripheral participant in global trade to a central player in East Asia's trade and production networks.

This article examines how multilateral negotiations for technology trade between China and capitalist countries helped dissolve the Cold War economic divide in East Asia. The integration of China—a communist country with significant geopolitical importance—into global capitalism marked a watershed. The existing scholarship on this topic tends to focus on the efforts of Western European countries and Japan to gain access to the China market in the mid-1960s or on US strategies for Sino-US rapprochement through trade in the early 1970s.[4] Scholars have examined Sino-capitalist bloc trade primarily through bilateral lenses, without contextualising it in broader dynamics within the capitalist bloc. Specifically, they have not addressed the multilateral negotiations within the capitalist bloc that led to the relaxation of export controls on China—a process driven by a delicate balance between economic and geopolitical interests. This article fills that gap by underscoring the competition and cooperation among capitalist countries in relaxing export controls on and advancing technology trade with China, thereby illustrating the growing significance of the China market in global trade amid the transformation of the Cold War in East Asia.

[4]On trade between China and Western European countries since the mid-1960s, see Takazu Kimura, 'LT Boeki No Kiseki: Kansei Nicchu "Minkan" Boeki Kyotei Ga Mezashita Mono (A Research of the LT Trade Agreement: The Establishment and Development of the Governmental China-Japan "Private" Trade Agreement (1962-73))', *Hisutoria* (Historia: Journal of Osaka Historical Association) 216 (2009): 109-34; Jigao Li, 'Yingguo Dui Zhongguo De Feiji Maoyi Jiqi Zhengce Yanbian (1954-72) (Sales of Aircrafts to China by the UK and Its Policy Evolution from 1954 to 1972)', (PhD diss., East China Normal University, Shanghai, 2017); Lei Zhou, 'Les coopérations industrielles et commerciales franco-chinoises des années 1950 aux 1970 (Franco-Chinese Industrial and Commercial Cooperation from the 1950s to the 1970s)', (PhD Diss., Paris Sciences & Lettres University, Paris; East China Normal University, Shanghai, 2018). On Sino-US trade during the 1970s and 1980s, see Kazushi Minami, 'Trade: A New Open Door', in *People's Diplomacy: How Americans and Chinese Transformed US-China Relations During the Cold War* (Cornell University Press, 2024), 44-66; Elizabeth O. Ingleson, *Made in China: When US-China Interests Converged to Transform Global Trade* (Harvard University Press, 2024).

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

This article particularly highlights the significance of the Coordinating Committee for Multilateral Export Controls (COCOM) in Sino-capitalist bloc trade during the Cold War.[5] In the wake of the Korean War, the United States and its allies, through COCOM, imposed export restrictions on China even stricter than those on the Soviet Union—the so-called 'China differential'. While COCOM members lifted the original differential in 1957, they introduced a new version in 1969, to hinder China from nuclear weapons testing by halting licensing procedures of 42 items toward China, while simplifying those toward the Soviet Union.[6] By the late 1960s, however, COCOM had become a curious venue of both competition and cooperation for access to the China market. Capitalist countries vied to sell goods to China, including restricted items, yet collaborated to reduce items on COCOM control lists and approve *exception* exports, that was, one-time exports of COCOM-embargoed items for civilian purposes. While scholars have studied COCOM's role in imposing economic divisions and restricting technology transfer to communist countries, they have not fully explored its influence on advancing East-West trade by relaxing export controls.[7] This article does this by showing how COCOM evolved into a platform for negotiation among capitalist countries to foster Sino-capitalist trade since the late 1960s.

Among hundreds of items controlled by COCOM, the computer was one of the most critical. It was a typical dual-use technology: one that had both civilian and military purposes. Invented and improved before and after World War II, the computer processed vast ballistic information and played a key role in the Manhattan Project to develop the atomic bomb. It also had a wide range of civilian uses, from accelerating product research in electromechanics, and telecommunication industries, to processing data for tumour treatment.[8] US companies including IBM took the lead in the computer industry. However, Japanese companies like Fujitsu and Hitachi challenged IBM's dominant position in the global market in the 1970s, by promoting mainframe computers that were as sophisticated as IBM's. So did Western European companies which heavily invested in computer development with governmental support. The Chinese, meanwhile, eagerly sought sophisticated computers from abroad, viewing them as key to modernisation with applications in weather forecasting, railway design, and oil exploration.

Computers became central to Cold War dynamics in 1958 when COCOM imposed controls on computer sales to communist countries. As historian Mario Daniels noted, the US government developed a 'special, unusually elaborate international regime' to restrict computer exports to the Soviet Union despite détente.[9] Historians have examined the computer's role in Cold War politics,

[5]The United States and its Western European allies established COCOM in Paris in 1950 to oversee the day-to-day operations of applying multilateral export controls on communist countries. By the end of the 1980s, COCOM had seventeen members: the United States, Britain, France, Italy, Belgium, Luxembourg, Norway, the Netherlands, Canada, Denmark, West Germany, Portugal, Japan, Greece, Turkey, Spain, and Australia. For studies on the COCOM, see Pi Cui, *Meiguo De Lengzhan Zhanlve Yu Bali Tongchou Weiyuanhui, Zhongguo Weiyuanhui: 1949-94* (US Cold War Strategies, COCOM, and CHINCOM, 1945-94) (Zhonghua Shuju, 2005); Michael Mastanduno, *Economic Containment: COCOM and the Politics of East-West Trade* (Cornell University Press, 1992).

[6]Motoyuki Takamatsu, 'Chaina Difarensharu Kanwa Mondai O Megutte No Aizenhawa Seiken No Taio (The Respond of the Eisenhower Administration on the Relaxation of China Differential)', *Kokusai Seiji* (International Politics), no. 105 (1994): 9-10, 60-79; 'Kokomu Ni Okeru Chaina Difarensharu Mondai Ni Taisuru Wagakuni No Taido (Japan's Attitude Toward China Differential in the COCOM)', 1 June 1971, 2015-0943, Diplomatic Archives of the Ministry of Foreign Affairs of Japan (hereafter, DAMFAJ).

[7]Ian Jackson, *The Economic Cold War: America, Britain and East-West Trade, 1948-63* (Palgrave, 2001); Shu Guang Zhang, *Economic Cold War: American's Embargo against China and the Sino-Soviet Alliance, 1949-63* (Woodrow Wilson Center Press; Stanford University Press, 2001); Frank Cain, *Economic Statecraft during the Cold War* (Routledge, 2007).

[8]Zuzhe Xu, *Suyuan Zhongguo Jisuanji* (Tracing the Origin of Chinese Computers), (Shenghuo, Dushu, Xinzhi, Sanlian Shudian, 2015), 3, 440, 465.

[9]Mario Daniels, 'Safeguarding Détente: U.S. High Performance Computer Exports to the Soviet Union', *Diplomatic History* 46, no. 4 (2022): 755-81.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

focusing on tensions between the United States and communist countries over computer trade, but its role in facilitating China's integration into global capitalism remains underexplored.[10] The dual-use nature of computers, with both military and civilian applications, made trading them especially complex. Japan and Western European countries were eager to export advanced computers to China for civilian purposes, and yet the United States worried that these systems might bolster China's military. Export licenses were granted only when COCOM members could collectively ensure that these exports posed no security risks. Capitalist countries, as shown in this article, formed a shared security perception of China in time and cooperated to safeguard computer exports.

Drawing on archival sources in Japan, the United States, China, and Britain, as well as some French materials, this article examines the case of computer trade between China and the capitalist bloc from 1968, when COCOM significantly revised export controls, to 1980, the year after the Soviet invasion of Afghanistan. It argues that the competition and cooperation within the capitalist bloc eroded the restrictive trade regime against China established before the Korean War. Despite capitalist countries' divergent economic and security interests, they found common ground in selling technology to China through multilateral dialogue. The story of the China-capitalist bloc technology trade thus contributes to global histories of capitalism and technological exchange by illuminating the understudied role of dual-use technology as a lever in dismantling the East-West economic divide. Such technologies often have been viewed in global history as a source of international division, with the Soviet Union and China strongly criticising capitalist countries for their stringent restrictions on the flow of these technologies.[11] This article, however, demonstrates that when COCOM could balance the security interests of its member countries, the enormous profit generated by dual-use technology trade became a powerful force that promoted new global economic and political interactions, expanding the world trade system and easing geopolitical tensions. This article thus complicates histories of Cold War bipolarity by tracing the transregional spread of increasingly important global commodities despite extant ideological and political divides.

Knocking the Door of the China Market

Long before the 1970s, China was already a lucrative market in the eyes of capitalist countries. Among them, the Japanese government permitted its companies to ship goods to the Chinese mainland in 1952, during the Korean War, partially to revitalise its postwar economy. After two years of complete cut-off following the Nagasaki Flag Incident of 1958, in which a rightist youth damaged a Chinese national flag at an exhibition of Chinese stamps, the Japanese and Chinese governments signed a series of trade deals, including the 1962 L-T (Liao Chengzhi-Takasaki Tatsunosuke) trade agreement, which boosted bilateral trade in agricultural products and minerals, among other fields, and the succeeding MT (Memorandum Trade) agreement of 1969, which reconfirmed the agreement between Japan and China on maintaining bilateral trade in the midst of the smouldering Cold War in East Asia.[12] The Ministry of International Trade and Industry of Japan, encouraging Japanese companies to localise the production of high-performance computers and explore overseas markets, viewed China as an important

[10]Paul N. Edwards, *The Closed World: Computers and the Politics of Discourse in Cold War America* (The MIT Press, 1996); 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* 40, no. 1 (2005): 131-47; Daniels, 'Safeguarding Détente'.

[11]For dual-use technology as a source of division among countries, see Carl Benedikt Frey, *The Technology Trap: Capital, Labor, and Power in the Age of Automation* (Princeton University Press, 2019); Jari Eloranta, Eric Golson, Peter Hedburg, eds., *Small and Medium Powers in Global History: Trade, Conflicts and Neutrality from the 18th to the 20th Centuries* (Routledge, 2019); Odd Arne Westad, *The Cold War: A World History* (Hachette Book Group, 2017); Pi Cui, 'Beiyue Zuzhi Dui Sulian Nengyuan Shebei Jinyun Zhengce De Yuanqi Yu Yingxiang (The Origin and Impact of the NATO Pipe Embargo to the USSR)', *Shiejie Lishi* (World History), no. 1 (2016), 104-17, 159-60.

[12]About the Sino-Japanese trade, see Kenji Hattori and Tomoo Marukawa, eds., *Nicchu Kankei Shi* (History of Sino-Japanese Relations), 1972-2012, vol. 2, (Tokyo University Press, 2012), 5-12; Kimura, 'LT Boeki No Kiseki'.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

trade partner.[13] In October 1968, the Foreign Ministry of Japan told the US State Department that 'it was not acceptable to strengthen controls (on computer exports) toward China'.[14] At the COCOM meeting that month, however, the US delegation disagreed, averring that computer designs and processes had military implications since they could improve the yield and efficiency of nuclear warheads and the delivery accuracy of missiles. 'In view of the state of technology in China', the US delegation asserted, 'no computers as defined by the Coordinating Committee should be exported there'.[15] Tensions between Japan and the United States over export controls on China were building.

The British government also supported relaxing export controls. In January 1950, it granted recognition to the PRC to protect its commercial interests in China. The British and Chinese governments maintained bilateral trade throughout the 1950s and 1960s through the British crown colony of Hong Kong, which offered the Chinese opportunities to earn much-needed foreign currency through exports and access to international financial markets.[16] At a November 1968 COCOM meeting, the British delegate put forward a proposal to relax export controls on computers that were not intended for space exploration or weapon development. He cited the widespread use of computers in human activities—from weapon development to industrial manufacture—and the increasing demand for computers for civil purposes such as geological prospecting and population census in both capitalist and communist countries. The US delegate took exception again nonetheless. He maintained that communist countries might use sophisticated computers for nuclear weapon development and missile delivery.[17] British policymakers were frustrated as they supported British businesspeople in exploring new markets for the burgeoning computer industry. During the 1960s, the British government invested heavily in high-performance computers through the Advanced Computer Technology Project, covering around 50 per cent of private-sector research expenses.[18] In January 1969, officials in London told the US State Department that it accepted stricter export restrictions on computer component technologies and production equipment but was 'not in the mood for curtailing of end-items on computer'.[19] Rapidly catching up with the United States in technological capabilities, Britain zealously promoted computer exports to China.

The French government, supported by its business community, sought to foster commercial ties with China since the early 1960s. In September 1963, a group of French industrial representatives led by Guillaume Georges-Picot, president of the French Far East Study Group of the French National Committee of Employers, visited China via Hong Kong and exchanged ideas with Chinese leaders including Vice Prime Minister Chen Yi and Vice Minister of Foreign Trade

[13]Fumihiko Yoshida and Koichi Iizuka, 'Japan's Industrial Policy and the Experience of the Computer Industry', *Journal of Arab Affairs* 10, no. 1 (1991): 41.

[14]Cable no. 1488 from Ambassador Matsui to Minister of Foreign Affairs, 'Kokomu Risuto Revuyu (1565 Densanki) (COCOM List Review (1565 Computers))', 2 November 1968, 2014-2052, DAMFAJ.

[15]'Coordinating Committee Record of Discussion on Item 1565-Electronic Computers and Related Equipment, 4th, 5th, and 6th November, 1968', 28 November 1968, 2014-2052, DAMFAJ.

[16]Martin Albers, *Britain, France, West Germany and the People's Republic of China, 1969-82: The European Dimension of China's Great Transition* (Palgrave Macmillan, 2016), 19; Li, 'Yingguo Dui Zhongguo De Feiji Maoyi Jiqi Zhengce Yanbian (1954-72)', 17.

[17]'Coordinating Committee Record of Discussion on Item 1565-Electronic Computers and Related Equipment, 4th, 5th, and 6th November, 1968', 28 November 1968, 2014-2052, DAMFAJ.

[18]Kiyomi Takahashi, 'Konpyuta Kigyo Ni Okeru Kokusaika To Kokusai Kyosoryoku (1950 Nendai Kara 1990 Nendai Made): IBM To Fujitsu No Meinfuremu Jigyo O Chushin Ni (Internationalisation and International Competitiveness in Computer Companies (the 1950s to the 1990s): Focusing on the Mainframe Business of IBM and Fujitsu)' (PhD diss., Meiji University, Tokyo, 2018), 21.

[19]Bureau of Economic Affairs, US State Department, 'E Staff Minutes', 7 January 1969, US Declassified Documents Online (hereafter, USDDO).

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

Lu Xuzhang to improve Sino-French economic relations.[20] As the French and Chinese governments established diplomatic relations in January 1964, bilateral trade immediately surpassed US$100 million.[21] In December 1965, French automotive manufacturer Berliet signed an important contract—'China License'—with China to supply 1,035 trucks and transfer manufacturing licenses to establish a factory. Another contract followed in November 1966 for Berliet's provision of another 600 trucks.[22] In May 1969, about forty French companies exhibited machine tools and civil engineering equipment in Beijing. The Chinese showed great interest in these exhibits. On the last day of that month, Vice Premier Li Xianian inquired about the exhibition's specifics from the French staff and subsequently attended the event accompanied by the French Ambassador to Beijing Etienne Manac'h.[23] Following the normalisation of Sino-French diplomatic relations, bilateral trade expanded rapidly owing to a series of commercial negotiations and exhibitions.

Unlike its allies, the US government initially used trade merely as a diplomatic signal to the Chinese government. In December 1969, Nixon approved US companies to import Chinese goods from a third country, including Hong Kong, where Chinese state companies, most notably Chinese Resources (Huarun), had been trading with capitalist countries.[24] In April 1970, the Nixon administration authorised selective export licensing to China.[25] Three months later, the Commerce Department extended licenses for General Motors (GM) engines—incorporated in Italian dump trucks—and GM earthmoving equipment through overseas dealerships to China.[26] In addition to easing US-China tensions, Nixon had a secondary motive to relax trade restrictions on China—to placate its allies, increasingly frustrated with US restrictions, which far exceeded the COCOM requirements. The State Department reported in April 1969 that lowering trade restrictions to the COCOM level would enable US companies to 'compete with European and Japanese interests for China market' and 'eliminate the irritants that the extra aspects of present trade controls represented in relations with allies', especially Japan and Britain.[27]

For China, the United States was a neglectable trading partner compared to other capitalist countries. At the Spring 1971 Canton Trade Fair, Minister of Foreign Trade Li Shude categorised Western countries into three groups: 1. countries with which China would eagerly trade, including France, Sweden, Finland, Canada, Switzerland, Italy, Denmark, and Norway; 2. countries with which China would trade only to a modest degree, such as Britain and Austria; and 3. countries which, due to political issues, China would increase exports to yet maintain moderate imports from, including West Germany, Belgium, Australia, New Zealand, and the Netherlands. Li

[20]Baihui Yao, ed., 'Zhongfa Jianjiao Duoguo (Diqu) Dangan Xuanbian (Si): Taiwan Jiemi Dangan (Multi-countries (Regions) Archives on the Normalisation of China-France Relations (IV): Declassified Archives in Taiwan)', *Lengzhan Guojishi Yanjiu* (Cold War International History Studies), no. 1 (2014): 306-7; 'Faguo Jingji Daibiaotuan Juxing Fanghua Jiuhui (French Economic Delegation Held the Reception of China Visit)', *Renmin Ribao* (People's Daily), 29 September 1963, 3.

[21]Zhongguo Duiwai Jingji Maoyi Nianjian Editorial Board, *Zhongguo Duiwai Jingji Maoyi Nianjian 1984*, IV-57.

[22]Note, 'Relations franco-chinoises (Franco-Chinese Relations)', 24 November 1967. Ministère des affaires étrangères, ed., *Documents diplomatiques français. 1967* (French Diplomatic Documents 1967), vol. 2 (P.I.E. Peter Lang, 2008), 667. For more details on Berliet-China contract, see Thierry Robin, 'Berliet, un constructeur automobile français face au marché chinois (années 1950-60) (Berliet, a French Automobile Manufacturer Facing the Chinese Market (1950s-60s))', *Relations Internationales* (International Relations) 146, no. 2 (2011): 43-58.

[23]Note, 'Les relations franco-chinoises (Franco-Chinese Relations)', 18 February 1969. Ministère des affaires étrangères, ed., *Documents diplomatiques français. 1969* (French Diplomatic Documents 1969), vol. 1 (PIE Peter Lang, 2011), 313; 'Li Xiannian Fuzongli Canguan Faguo Jichuang Ji Qixie Zhanlanhui (Vice President Li Xiannian Visited French Machine Tools and Engineering Equipment)', *Renmin Ribao*, 31 May 1969, 5.

[24]Henry A. Kissinger, 'Proposal on China Policy', 11 December 1969, Box H-134, NSC Institutional Files, RNL.

[25]*China: U.S. Policy since 1945*, Congressional Quarterly, Inc, 192.

[26]Min Song, 'Economic Normalization: Sino-American Trade Relations from 1969 to 1980' (PhD diss., University of Georgia, Athens, 2009), 25-6.

[27]Memorandum, White House, 'Background Information on US Policy toward China in Preparation for the 6/25/69 National Security Council (NSC) Meeting', 17 June 1969, USDDO.

instructed municipal and provincial representatives that the American 'imperialists' were enemies on par with 'the Soviet revisionists', with which they should 'concentrate all the strength to fight'.[28] All the capitalist businesspeople who attended the Canton Trade Fair were keen on trading with China. John Denson, a British observer at the fair, reported that the Japanese dominated the China market, and the Canadians zealously advanced wheat trade after the establishment of Sino-Canadian diplomatic relations in October 1970.[29] American 'imperialists' were falling far behind. In April 1972, some forty US businesspeople participated in the Canton Fair for the first time and signed over seventy contracts with the Chinese, but the total value of these transactions was only US$1.78 million, less than one per cent of the total deals made at the fair.[30] Sino-American trade was overshadowed by Sino-Japanese trade. Until 1978, it even remained smaller than Chinese trade with Britain and France.

Nixon continued to relax trade restrictions on China. In June 1971, two months after lifting the China embargo, he released a list of 47 categories of exportable and nonstrategic items, including farm products, household appliances, automobiles, and basic metals like steel. The Nixon administration also began to review major items of possible strategic value, such as high-grade computers, commercial aircrafts, trucks, and locomotives, on a case-by-case basis and granted special licenses if 'consistent with the requirements of US national security'.[31] This move reverberated within the capitalist bloc. The Japanese government applauded the US decision as 'contributing to alleviating the tension in the Far East', while the British government immediately sought a special licence from the United States to export John Brown Engineering's industrial gas turbine generating sets to China, which used know-how and components of General Electric (GE).[32] The US Commerce Department promised to expedite the review process and respond within two weeks, half the usual time.[33] The business went smoothly with US approval. John Brown Engineering signed a £3.5-million contract with China National Machinery Import and Export Corporation (CNMIEC) on 21 December 1971 and completed the delivery eight months later.[34] Owing to Nixon's new policy, a growing number of technologies from the United States and its allies flooded into the China market.

Capitalist countries began to take bolder action in the COCOM. In December 1971, the Japanese delegate proposed to abolish the China Committee (CHINCOM), a working group in COCOM to administer the Consolidate China Special List, which had long been abolished in

[28]'Duiwaimaoyibu Li Shude, Wu Shudong Tongzhi Zai Canjia Guangjiaohui De Gesheng, Shi Daibiao Huiyi Shang Jieshao Woguo Waimao Guobie Diqu Zhengce (Comrades Li Shude and Wu Shudong of the Ministry of Foreign Trade Introduced Our Country's Country-Region Policies on Foreign Trade at the Meeting of Provincial and Municipal Representatives for the Canton Fair)', 19 May 1971, 1021-6-4, Hebei Provincial Archives.

[29]John Denson, 'Trading with China: The Canton Fair', 1 June 1971, Foreign and Commonwealth Office (hereafter, FCO) 21/842, The National Archives of the UK (hereafter, TNA).

[30]The Centre of Foreign Trade of China, ed., *Baijie Huihuang: Zhongguo Chukou Shangpin Jiaoyihui 100 Jie Jinian* (100 Sessions Glory: Memorial of 100 Sessions CECF), (Nanfang Ribao Chubanshe, 2006), 135; National Local Product and Livestock Trade Group of China, '1972 Nian Chunjiaohui Duimei Maoyi Gongzuo Qingkuang Xiaojie (Summary of Trade with US in the 1972 Spring Canton Fair)', 16 May 1972, 324-2-114-041-048, Guangdong Provincial Archives (hereafter, GDPA).

[31]Robert B. Semple Jr., 'President Ends 21-Year Embargo on Peking Trade', *The New York Times*, 11 June 1971, 1.

[32]'Kyusoku Ni Hatten Sumai, Bei No Taichu Boeki Kanwa, Gaimusho Ga Kenkai (Opinion from the Ministry of Foreign Affairs: Do Not Develop Rapidly, US Relaxation to the Trade with China)', *Asahi Shimbun*, 15 April 1971, 3; Douglas-Home, 'John Brown Engineering (Clydebank) LTD: Gas Turbines for China', 9 June 1971, FCO 21/845, Foreign Office Files for China, 1919-80, Archives Direct, Adam Matthew Digital (hereafter, AD AMD).

[33]Cable from British Embassy Washington, 'Gas Turbines for China', 20 June 1971, FCO 21/845, Foreign Office Files for China, 1919-80, AD AMD.

[34]Cable from the Office of British Chargé d'Affaires, 'To Priority FCO TELNO 1278 of 21 December and Info to Department of Trade and Industry for CRE 4 and BTC Hong Kong', 21 December 1971, FCO 21/845, Foreign Office Files for China, 1919-80, AD AMD; Cable from the Office of British Chargé d'Affaires, 'For Cochlin, CRE 4 From Hum: John Brown Engineering', 15 December 1971, FCO 21/845, Foreign Office Files for China, 1919-80, AD AMD.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

1958.[35] The Canadian delegate supported the Japanese proposal as the first step toward ending the 1968 'China Differential'.[36] In January 1972, all COCOM members agreed to abolish the CHINCOM.[37] By March 1975, the COCOM were treating China and the Soviet Union at a similar level in the licensing procedure by removing 41 out of 42 items from the control list, leaving the computer as only one item in the 'China Differential'.[38]

At the same time, China's technology imports from capitalist countries were expanding. On the heels of Nixion's visit, the Chinese government prioritised the purchase of US technology in the Spring 1972 Canton Fair, where the Ministry of Foreign Trade of China hosted US exporters willing to sell advanced technology, including representatives from the San Francisco Chamber of Commerce and Sobin Chemicals Company.[39] As the Chinese embarked on an orchestrated plan to import modern technology from capitalist countries, however, they prioritised US allies with formal diplomatic ties as trading partners. In March 1973, the State Council of China launched the 'Four-three Plan' (*Sisan Fang'an*) to spend US$4.3 billion on importing whole plants and machines from capitalist countries, particularly Japan and West Germany, a second such project after the Sino-Soviet economic cooperation of the 1950s.[40] Provincial and municipal authorities emulated the central government's behaviour. In September 1973, the Shanghai Municipal Bureau of Light Industry conducted thirteen import projects from Japan and Western European countries, ranging from food processing to printing.[41] Following Mao's instruction 'Making the foreign serve China' (*Yangwei Zhongyong*), the Chinese government embraced technology from the capitalist bloc.

Western European countries and Japan developed various strategies to market computers in China. A Japanese computer firm, for example, proposed to Prime Minister Tanaka Kakuei's secretary that the prime minister bring computers as souvenirs when he visited China in September 1972. The Tanaka administration was keen on the idea, but it failed to obtain approval in the COCOM since high-performance computers were on the control list, and even less sophisticated computers were off limits due to the 'China Differential'.[42] Japan, France, Britain, and several other capitalist countries also held some ten industrial exhibitions in 1972 and 1973, with promotional videos of their products. The British Industrial Technology Exhibition, for instance, took place in Beijing in March 1973, joined by 349 British companies, covering a wide range of products from aerospace instruments to electronics, industrial plants to scientific tools.

[35]Cable no. 1923 from Minister of Foreign Affairs to Ambassador in France, 'Chinkomu Haishi Teian Ni Tsuite (About the Abolishment of CHINCOM)', 1 December 1971, 2014-2173, DAMFAJ.

[36]Cable no. 42 from Ambassador Nakayama to Minister of Foreign Affairs, 'Chinkomu Haishi Teian (The Proposal of the Abolishment of CHINCOM)', 11 January 1972, 2014-2173, DAMFAJ.

[37]Cable no. 346 from Ambassador Nakayama in France to Minister of Foreign Affairs, 'Chinkomu No Haishi Ni Tsuite (Kokomu) (About the Abolishment of CHINCOM (COCOM))', 20 February 1972, 2014-2173, DAMFAJ.

[38]'Daiikkai Nicchu Boeki Kongo Iinkai Ni Okeru Kokomu Ni Kansuru Waga Hatsugen Yoryo (An) (Outline of Our Statement on COCOM at the First Meeting of the Sino-Japanese Trade Joint Committee (Draft))', 27 March 1975, 2015-0943, DAMFAJ.

[39]Bureau of Foreign Trade of China, 'Guanyu Zhongmei Maoyi Wenti (About US-China Trade)', 22 March 1972, 324-2-117-046-050, GDPA; China Native Products and Livestock Production Trading Group, '1972 Nian Chunjiaohui Duimei Jiaoyi Gongzuo Qingkuang Xiaojie (Summary of US-China Trade on the 1972 Canton Trade Fair)', 5 June 1972, 324-2-114-041-048, GDPA; The Centre of Foreign Trade of China, ed., *Baijie Huihuang*, 137.

[40]State Council of the People's Republic of China, 'Guowuyuan Dui Guojia Jiwei Guanyu Chengtao Shebei Jinkou Wenti De Qingshi Baogao De Pifu (Reply of the State Council to the Request of the State Planning Commission for Importing the Complete Sets of Equipment)', 22 March 1973, *Documents of the State Council* 5, no. 20 (1973), GDPA. On 'Sisan Fang'an', see Lei Liu, 'China's Large-Scale Importation of Western Technology and the U.S. Response, 1972-76', *Diplomatic History* 45, no. 4 (2021): 794-820.

[41]Shanghai Municipal Bureau of Light Industry, 'Guanyu Woju 73 Nian Duiwai Zuotan, Chuguo Kaocha Hou Weiwosuoyong Qingkuang De Huibao (Report on The Situation of Assimilation after Symposiums with Foreigners and Overseas Study Trips in 1973)', 18 September 1973, B163-4-446-23, Shanghai Municipal Archives (hereafter, SHMA).

[42]Ministry of Foreign Affairs of Japan, 'Souri Hochu Miyage Toshite No Densanki Ni Tsuite (About Computer as a Souvenir during the China Visit by Prime Minister)', 6 September 1972, 2014-2322, DAMFAJ.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

Marvelling at the contracts signed at the exhibition, worth more than £1 million, Michael H. Morgan, a counsellor at the British Embassy in Beijing, praised it as 'a powerful boost to the development of longer-term trade between Britain and China'.[43]

Western European countries and Japan cultivated the China market through another channel: science and technology exchanges. They sent technicians to China to showcase product samples, model machines, and industrial materials for Chinese officials while offering suggestions on specific problems that the Chinese were encountering in factories. In the autumn of 1972, 43 representatives from nineteen Japanese companies toured China and talked with 195 Chinese representatives from nine national ministries and commissions as well as 179 manufacturing and research institutions nationwide. Technicians from Shimadzu Corporation, for example, introduced human resource management in software designing and hardware manufacturing in Japan's computer industry, emphasizing the importance and necessity of more investment in software development.[44] Between 1970 and 1973, 2,234 delegates from countries like Japan, West Germany, Britain, France, Italy, and Canada, held 1,746 symposiums on science and technology in China.[45] The Chinese were mesmerised by the technological prowess of these countries, which seemed to obviate modern US technology. The Ministry of Foreign Trade of China reported in November 1973 that the gap in civilian technology between the United States and other capitalist countries was narrowing—US allies even had competitive edges in certain areas, such as West Germany's metallurgy, machinery, automobiles, chemical and petrochemical industries, and electronics.[46] The Chinese always had other reliable partners in technology trade than the United States.

France stood out in the capitalist competition for the China market. Although Sino-French trade in the early 1970s was in a modest volume compared with Sino-Japanese trade, the French were bold in technology exports to China. They bypassed the COCOM export controls to sell military technology to China, for instance, exporting a cine theodolite for missile tracking through a Swiss subsidiary in 1972.[47] The French also enhanced technological capability to obtain advantages in computer trade. In 1973 alone, the French government invested several times as much in computer research and development as the British government did. British computer companies, exhausted by the competition with other capitalist countries and the diversification of market demands—for both mainframe computers and minicomputers—struggled to survive by cultivating new overseas markets like China, not by relying on government subsidy in the industry.[48] For French companies, overcoming trade restrictions and leveraging technological advantages were crucial in their technology trade with the Chinese.

US companies, despite their advanced technological capabilities, struggled to export to China due to stringent trade restrictions. In March 1972, the US State Department summarised that the 'China Differential' in the COCOM harmed the United States more than its allies because 'in areas where the United States had a technological lead—namely, avionics, communications equipment, and computers . . . the more sophisticated US items are caught by the embargo while the products

[43]'British Industrial Technology Exhibition Peking 1973: Questionnaire-Summary', 7 July 1973, FCO 21/1113, TNA; M. H. Morgan, 'British Industrial Technology Exhibition Peking-March 1973', 21 May 1973, FCO 21/1113, TNA.

[44]Science and Technology Group of Shanghai Revolution Committee, '1972 Nian Qiuji Guangjiaohui Shanghai Duiri Zuotanhui Gongzuo Zongjie (Summary of the Sino-Japanese technical Symposium in Shanghai during the Canton Trade Fair in Autumn 1972)', December 1972, C42-2-31-48, SHMA.

[45]Chinese Academy of Science, etc., 'Guanyu Jiaqiang Duiwai Jishu Zuotan Gongzuo (Request for Strengthening Technical Symposiums with Foreigners)', 20 June 1974, SZ122-4-195-5, Hubei Provincial Archives.

[46]International Trade Research Institute in the Ministry of Commerce of China, ed., 'Guanyu Jishu Maoyi Ji Woguo Yinjin Jishu De Wenti (Regarding Issues on Technology Trade and Transfer in China)', *Waimao Diaoyan* (Foreign Trade Research), no. 116 (15 November 1973): 5.

[47]'Record of Anglo-US Consultations on Asia, Foreign and Common Wealth Office, London 26/27 October', 28 November 1977, FCO 21/1545, Foreign Office Files for China, 1919-80, AD AMD.

[48]James W. Cortada, 'Public Policies and the Development of National Computer Industries in Britain, France, and the Soviet Union, 1940-80', *Journal of Contemporary History* 44, no. 3 (2009): 503-7.

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of less advanced producers are not'.[49] Despite the Defence Department's resistance, Nixon accepted the State Department's suggestion of abolishing the 'China Differential'.[50] The Nixon administration further relaxed export controls on China, particularly in industries where it had a technological advantage over its allies, including the computer. In July 1973, Nixon appointed Gus W. Weiss Jr., a member of the Council on International Economic Policy, to lead an interagency task force to investigate ways to sell computers to China and to analyse the security risks involved.[51] Upon recommendations by the task force, Nixon issued the National Security Decision Memorandum 247 on 14 March 1974, which eliminated the differential of US restrictions on computer exports to China and to the Soviet Union.[52] The United States was anxious to catch up with its allies in the race to the China market.

Opportunities Beneath the Global Crisis

In the mid-1970s, the receding momentum of the US-China rapprochement hindered bilateral trade. US President Gerald Ford gave up advancing the normalisation of relations with China as Congress warned that it would damage US-Taiwan relations.[53] Chinese leaders also became less passionate about normalisation, partially because they were confident in confronting the Soviet Union without US assistance.[54] Insisting on normalising US-China relations before expanding bilateral trade, Chinese leaders turned to US allies, with which it had normalised bilateral relations, to purchase advanced technology. For instance, in 1973, Vice Prime Minister Li Xiannian and Chen Yun, who was in charge of foreign trade affairs in the Chinese State Council, approved the import of 1.7-meter steel sheet rolling mills from West Germany and Japan, rejecting a lower-price offer from the United States due to the absence of diplomatic relations.[55] When Minister of Foreign Trade Bai Xiangguo met with Prime Minister Edward Heath on 15 January 1973, he, on behalf of the Chinese government, conveyed his satisfaction at the burgeoning Sino-British trade, highlighting that 'the existing good base in political relations was also a positive factor'.[56] The stagnation in US-China relations left business chances to other capitalist countries.

The British government seized every chance to strengthen economic ties with the Chinese. In June 1973, a group of British officials from the Foreign and Commonwealth Affairs Office including the Secretary of State for Foreign and Commonwealth Affairs Alec Douglas-Home convinced Chinese Foreign Minister Ji Pengfei that the British government would place few export

[49]Memorandum, Winthrop G. Brown, 'Submission of Response to NSSM 149-CIEPSM 21', 24 March 1972, Box H-061, NSC Institutional Files, RNL.

[50]Memorandum, William P. Rogers, 'Differential Treatment of the PRC in COCOM List Review Negotiations', 20 March 1972, USDDO; Memorandum, Melvin Laird, 'Differential Treatment of the PRC in COCOM List Review Negotiations', 9 May 1972, USDDO; Memorandum, Henry A. Kissinger and Peter M. Flanigan, 'Differential Treatment of the PRC in COCOM List Review Negotiations', 12 June 1972, USDDO.

[51]Cable no. 3206 from Ambassador Yasugawa to Minister of Foreign Affairs, 'Densanki No Kokomu Kise Ni Kansuru Howaitohausu Kenkyu Gurupu No Setsuritsu (The Establishment of the White House Study Group on COCOM Controls on Computers)', 18 July 1973, 2014-2322, DAMFAJ.

[52]National Security Decision Memorandum 247, Henry A. Kissinger and Peter M. Flanigan, 'U.S. Policy on the Export of Computers to Communist Countries', 14 March 1974, Box H-208, NSC Institutional Files, RNL; Gus W. Weiss, 'The Farewell Dossier', *Studies in Intelligence* 39, no. 5 (1996): 123.

[53]Rosemary Foot, 'Prizes Won, Opportunities Lost: The U.S. Normalization of Relations with China, 1972-79', in *Normalization of U.S.-China Relations: An International History,* ed. William C. Kirby, Robert S. Ross, Gong Li (Harvard University Asia Center, 2005), 94-7.

[54]Robert S. Ross, *Negotiating Cooperation: The United States and China, 1969-89* (Stanford University Press, 1995), 70-5.

[55]Donglin Chen, ed., *1966-76 Nian Zhongguo Guomin Jingji Gaikuang* (Overview of China's National Economy, 1966-76), (Sichuan Renmin Chubanshe, 2015), 269-70.

[56]'Record of a Conversation between the Prime Minister and the Chinese Minister of Foreign Trade at 5.15 P.M. on Monday, 15 January 1973', FCO 21/1110, TNA.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

controls on China given that Britain was a member of the European Economic Community (EEC), a regional economic organisation created in 1957 and separate from the COCOM.[57] The Chinese government was delighted at the British government's commitment to bilateral trade as well as its statistical data. The trade volume between Britain and China surged to US$632.16 million in 1973, marking a twofold increase from the previous year.[58] When Vice Premier Deng Xiaoping visited Britain in May 1974, he praised that 'Britain was more enlightened than some other countries and took a less strict attitude about trade'.[59]

Around the same time, it became increasingly clear that opportunities for the computer trade lay in the oil industry. With abundant onshore and offshore oil reserves, China increasingly demanded advanced computers for oil exploration. The United States had installed eight mainframe computers and 74 medium-sized computers for geological data processing as early as 1957; Daqing, the largest Chinese oilfield in Heilongjiang Province, had only two analogue computers by 1963, which proved insufficient to analyse the complex geological features of the Northeast region. In 1970, the Ministry of Petrochemical Industry of China planned to import digital computers for seismic exploration.[60]

The 1973 oil crisis accelerated technology transfer for oil exploration between capitalist countries and China. Wrecked by the oil shock, Japan was among the most zealous countries to provide technology to explore and develop Chinese oil.[61] Japan purchased a small amount of Chinese oil in 1973 and set its eyes on a long-term oil trade agreement with China. In November 1975, Japanese Minister of International Trade and Industry Koumoto Toshio convinced Chinese Minister of Foreign Trade Li Qiang that China's oil exports to Japan were 'mutually beneficial to both sides'.[62] At a meeting with Chinese Minister of Petrochemical Industry Kang Shi'en, Komoto promised to provide advanced technology and equipment for China in exchange for oil.[63] Parallel to Koumoto's visit, a delegation of Itochu Corporation, one of the largest Japanese 'general trading companies' (*sogo shosha*), treated by Beijing as a 'friendship trade company' (*youhao shangshe*) since the early 1960s, arrived in Beijing to attend technological symposia on liquified natural gas (LNG), state-of-the-art technology that made natural gas a viable substitute for oil, and later visited Shanghai to survey the local industrial development accompanied by representatives from the Shanghai Chemistry Industry Bureau.[64] In March 1976, a delegation led by Yazawa Eimei, president of the Japanese Scientific Instruments Association, toured research institutes and petroleum refineries around China, touting Japanese instruments designed for oil processing.[65] Japanese businesspeople and politicians spared no efforts in trading technology for oil with the Chinese.

[57]'Record of a Conversation between the Secretary of State for Foreign and Commonwealth Affairs and the Chinese Foreign Minister Held at the Foreign and Commonwealth Office on Thursday 7 June 1973 at 4 PM', FCO 21/1105, TNA.

[58]Zhongguo Duiwai Jingji Maoyi Nianjian Editorial Board, *Zhongguo Duiwai Jingji Maoyi Nianjian 1984*, IV-67.

[59]'Record of Conversation between the Rt Hon Edward Heath MBE MP, the Leader of the Opposition, and Vice-Premier Teng Hsiao-P'ing at the Guest House on Monday 27 May at 3.35 P.M.', FCO 21/1340, TNA.

[60]Xu, *Suyuan Zhongguo Jisuanji*, 451-4.

[61]Junichiro Shiratori, *'Keizai Taikoku' Nihon No Gaiko: Enerugi Shigen Gaiko No Keisei, 1967-74* ('Economic Power' Japan's Diplomacy: The Formation of Energy Resource Diplomacy, 1967-74) (Chikura Shobo, 2015), 186-87.

[62]Cable no. 1965 from Ambassador Ogawa to Minister of Foreign Affairs, 'Koumoto Tsusan Daijin Hochu (Minister of International Trade and Industry Koumoto visited China)', 17 November 1975, 2014-2323, DAMFAJ.

[63]Cable no. 1967 from Ambassador Ogawa to Minister of Foreign Affairs, 'Koumoto Tsusan Daijin Hochu (Minister of International Trade and Industry Koumoto visited China)', 17 November 1975, 2014-2323, DAMFAJ.

[64]Shanghai Chemical Industry Bureau Reception Group, 'Jiedai Riben Yitengzhong Shangshe Jishu Jiaoliu Daibiaotuan Jianbao (Briefing on the Reception of a Technology Exchange Delegation of Itochu Corporation from Japan)', 15 November 1975, B76-4-915-15, SHMA.

[65]Shanghai Petrochemical Department External Liaison Group, 'Jiedai Riben Shiyou Chanpin Shiyan Yiqi Jishu Jiaoliutuan Jianbao (Briefing on the Reception of the Technology Exchange Delegation of Petroleum Products Laboratory Instrumentation from Japan)', 8 April 1976, B76-4-971-14, SHMA.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

The British businesspeople hoped to import Chinese oil as well. They strove to transfer oil exploration technology to China to secure access to Chinese oil as a cost-effective alternative to Middle Eastern sources. In October 1975, Eric Drake, chairman of the board of British Petroleum, visited the Ministry of Petrochemical Industry of China, hoping to 'put Britain on the Chinese map as a future source of oil technology and equipment'. During his trip to China, he also toured the Peking Petrochemical Plant to investigate China's capacity for oil-related product manufacturing.[66] Similar to Japan, Britain sought long-term cooperation with China in trading technologies for oil.

French and Canadian companies also competed to sell to the Chinese computers for oil exploration in 1974. That February, CDC France, the French subsidiary of computer giant Control Data Corporation (CDC), and Compagnie Generale Geophysique (CCG), a French oil firm, jointly tried to sell a Cyber computer and associated software designed to process seismic data for offshore oil exploration to the China National Technical Import and Export Corporation (TECHIMPORT), a state-owned company for foreign technology trade. At the same time, a Canadian group led by CDC Canada initiated commercial negotiations with TECHIMPORT for the same product. With six months of negotiations, TECHIMPORT signed a contract valued at US$6.7 million with the French while parallel negotiations with the Canadian broke off.[67] The lure of Chinese oil business turned even sister subsidiaries of the same computer company into rivals.

US companies did not just sit by. They repeatedly persuaded the Ministry of Foreign Trade of China and the China Council for the Promotion of International Trade, a semi-governmental trade organisation founded in 1952, to advance US-China technology cooperation in oil and gas exploration, including in the South China Sea, which was rumoured to be rich in natural resources.[68] By May 1976, US oil firm Geospace had exported two computers to China for processing geographical data in oil surveys.[69] In addition, Geospace arranged a team of field equipment technicians to train the Chinese to operate special vehicles designed for exploratory work.[70] As noted by the Central Intelligence Agency, however, the United States fell behind its allies in the race for 'technology for oil'. By August 1975, the Ministry of Fuel and Chemical Industrial of China and CNMIEC had signed contracts with companies from Japan, France, and Denmark for offshore support equipment, and were planning to purchase drilling equipment from West Germany. On the contrary, US companies made little progress.[71]

US export controls were the main culprit, but Ford could not fix them easily. Desperate to maintain détente with Moscow, which railed at the Export-Import Bank Legislation that restricted credits to the Soviet Union and the Johnson-Vanik amendment to the 1974 Trade Act that denied most favoured nation (MFN) status to any country restricting emigration, including the Soviet Union, Ford adhered to an even-handed export control policy—imposing equal restrictions on the Soviet Union and China.[72] In February 1975, US computer firm Burroughs planned to sell CNMIEC a B-7700 computer. The performance capabilities of B-7700, Burroughs claimed, did

[66]Edward Youde, 'Letter from British Embassy', 8 October 1975, FCO 21/1368, TNA.

[67]Cable, US Liaison Office in Beijing, 'PRC Negotiation for Computer to Process Seismic Data for Offshore Oil Exploration', 4 May 1974, Doc. No.: 1974PEKING01450, US National Archives and Records Administration, Access to Archival Databases (hereafter, NARA AAD).

[68]National Council for US-China Trade, 'Report of the Visit by the Delegation from the National Council to the People's Republic of China, November 4-16, 1973', 12 December 1973, Box 36, National Council for US-China Trade Administrative Records, Gerald Ford Library; Bureau of Foreign Trade of China, 'Jiedai Meiguo Jiujinshan Shanghui Daibiaotuan Jianbao (1) (Briefing for Receiving US San Francisco Chamber of Commerce Delegation (1)), 30 April 1975, B170-3-335, SHMA.

[69]Cable, US Liaison Office in Beijing, 'US Exception to COCOM Ruling on Seismic Computer to PRC', 8 May 1976, Doc. No.: 1976PEKING00835, NARA AAD.

[70]Cable, US Liaison Office in Beijing, 'Sino-US Trade—Visitors to Peking in January', 31 January 1975, Doc. No.: 1975PEKING00170, NARA AAD.

[71]Report, 'China's Offshore Oil Exploration OER Project no. 23.08206', August 1975, CIA-RDP79T01098A000600020004-5, CIA Records Search Tool Collection Online. https://www.cia.gov/readingroom/docs/CIA-RDP79T01098A000600020004-5.pdf.

[72]For the 1974 Trade Act, see Alan P. Dobson, *US Economic Statecraft for Survival 1933-91: Of Sanctions, Embargoes, and Economic Warfare* (Routledge, 2002), 223-6.

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not exceed those of computers sold to the Soviet Union.[73] The State Department took exception nonetheless.[74] That September, the Export Administration Review Board, an interagency board composed of the Secretaries of Commerce, State, and the Secretary of Defence, rejected Burroughs' application, viewing B-7700 as too sophisticated for exporting to China.[75]

US policymakers took pains to clarify US even-handed policy to Chinese leaders after the denial of Burroughs' request. In December 1975, Vice Premier Deng Xiaoping complained to President Ford and Secretary of State Henry Kissinger about the strict restrictions on Chinese imports. Kissinger explained that the US policy did not allow exporting computers with the calculating speed of ten million operations per second to either China or the Soviet Union. 'Mr. Vice Premier', Ford added, 'in principle, we would be very anxious to be helpful in the computer area, and I think we can be'. Kissinger encouraged the Chinese to consult US firms like Burroughs to identify computers that met China's needs and the standard of approval by the US government and COCOM.[76] The Ford administration, in other words, insisted on maintaining its export controls.

Nevertheless, US allies pressed the United States to make a change. Thirsty for Chinese oil, the French government sought US cooperation to export Cyber 172, a sophisticated computer for oil exploration, to China. Unlike in the B-7700 case, The US government initially pended, rather than denied, the license application of Cyber 172, which CDC France submitted through its US-based parent company in May 1975.[77] B-7700, with extensive end-uses like hydraulic engineering and metallurgy, required strict on-site safeguards against potential military diversion, a condition unacceptable to the Chinese. Cyber 172, though as sophisticated as B-7700, was limited to seismic data processing in offshore oil exploration. On-site safeguards were unnecessary.[78] Cautious about computer exports to China, the US NSC requested a CIA study on the development of the Chinese computer industry and the licensing policy currently implemented by the Commerce Department. In October 1975, five months after CDC's application, the CIA reported that the computer industry in China was heavily reliant on foreign technology since current domestic computers were 'only as effective as US computers of ten years ago'. The CIA also noted that the Chinese refused to implement safeguards, such as on-site inspections, which was anticipated by the US government. Disagreements between the US and Chinese governments on safeguards challenged China's imports of US computers.[79]

Finding mutually acceptable safeguards for all stakeholders—CDC, the US and Chinese governments, and COCOM members—was the key. CNMIEC declined to provide information on imported computers' end uses and users, but US officials patiently explained that obtaining this information was a routine procedure of international trade, regardless of export destinations.[80]

[73]Cable, US Liaison Office in Beijing, 'Burroughs Computer Negotiations with PRC', 19 February 1975, Doc. No.: 1975PEKING00268, NARA AAD.

[74]Cable, US State Department, 'Burroughs Computer Negotiations with PRC', 20 February 1975, Doc. No.: 1975STATE039098, NARA AAD.

[75]Cable, US State Department, 'Daily Activities Reports from the Principals for Tuesday, September 23, 1975', 23 September 1975, Doc. No.: 1975STATE227164, NARA AAD; Briefing Paper, US State Department, 'Trade and Economic Relations', November 1975, China and the United States: From Hostility to Engagement, 1960-98, Digital National Security Archive, ProQuest Document ID: 1679040788 (hereafter, DNSA).

[76]Memorandum of Conversation, 'Taiwan; Bilateral Relations; MIA; Trade (Oil and Computers); Dalai Lama; Korea; Chinese Minorities; Agriculture; Amb. Bush', 4 December 1975, China and the United States: From Hostility to Engagement, 1960-98, DNSA, ProQuest Document ID: 1679040722.

[77]Song, 'Economic Normalization', 211.

[78]Cable, US Liaison Office in Beijing, 'Burroughs Computer Negotiations with PRC', 19 February 1975, 19 February 1975, Doc. No.: 1975PEKING00268, NARA AAD; Cable, US Liaison Office in Beijing, 'PRC Negotiation for Computer to Process Seismic Data for Offshore Oil Exploration', 4 May 1974, Doc. No.: 1974PEKING01450, NARA AAD.

[79]Central Intelligence Agency, 'Computers in China: The State of the Art', 15 October 1975, NLC-26-58-3-2-5, Remote Archives Capture, Jimmy Carter Library (hereafter, RAC, JCL).

[80]Memorandum, Winthrop G. Brown, 'Submission of Response to NSSM 149-CIEPSM 21', 24 March 1972, Box H-061, NSC Institutional Files, RNL.

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After several rounds of negotiations, the State Department agreed to forgo 'more rigorous procedures that [it] required from the USSR' and to substitute a formal end-user statement with 'a letter containing most, if not all, of the pertinent information', provided by CNMIEC.[81] The licensing process was not yet complete. In September 1975, the French government pressured US officials to expedite a decision on the Cyber 172 case, but the request was delayed due to concerns about safeguards.[82] The US government shifted the French government's pressure to CDC and its French subsidiary. In March 1976, the Commerce Department informed CDC of the conditions for US approval, harsher than the CDC had anticipated, including a clause that 'limited official use at the seismic data centre for at least three years after installation and acceptance of Cyber 172 [in China]'. The Chinese importer would never accept such a condition. Two months later, CDC proposed a technical service agreement to CNMIEC to break the impasse, which assigned a person on site for eighteen months and the possibility of further visits afterwards.[83] CNMIEC agreed in principle, without granting the technician unrestricted access to the Cyber 172.[84]

The Ford administration accepted CDC's safeguard arrangement for Cyber 172. On 20 October 1976, the Commerce Department gave official approval to CDC, and the US delegate at the COCOM withdrew its objection to the French request.[85] Although CDC would deliver the Cyber 172 to China only three years later, in September 1979, due to complicated administrative procedures, it was far greater in size and capacity than any computer previously sold to China by capitalist companies.[86] US high administration officials asserted that the sale, approved only about a month after the Chairman of the Chinese Communist Party Mao Zedong passed away, represented 'a gesture of support to the new Chinese leadership' under Mao's handpicked successor, Hua Guofeng.[87] The Cyber 172 case illuminated the intricate relationship among capitalist countries in technology trade with China—the combination of competition for the China market and cooperation in the export control system. Yet the Ford administration's efforts to facilitate the deal also laid bare the fact that its policy on export controls on China, either at the US Export Administration Review Board or at the COCOM, made technology trade exceedingly difficult.

The 'China Tilt'

In the second half of the 1970s, France vigorously exported computers to China, partially encouraged by the Cyber 172 case. According to the COCOM records of license requests in 1976,

[81]Cable, US Liaison Office in Beijing, 'Sale of Computer to PRC by Control Data Corporation', 26 August 1974, Doc. No.: 1974PEKING01450, NARA AAD; Briefing Paper, US State Department, 'Trade and Economic Relations', November 1975, China and the United States: From Hostility to Engagement, 1960-98, DNSA, ProQuest Document ID: 1679040788.

[82]US Secretary of State, 'Addendum to Briefing Memorandum to the Secretary for September 7 Meeting with Giscard and De Guiringaud', 4 September 1976, Doc. No.: 1976STATE219518, NARA AAD; Cable no. 4302 from Ambassador Togo to Minister of Foreign Affairs, 'Chugoku Muke Konpyuta Yushutsu (B) (Computer Exports to China (B))', 28 October 1976, 2014-2324, DAMFAJ.

[83]Cable, US Liaison Office in Beijing, 'US Exception to COCOM Ruling on Seismic Computer to PRC', 19 April 1976, Doc. No.: 1976PEKING00716, NARA AAD.

[84]Memorandum of Conversation, US State Department, 'CDC Computer for the PRC', 12 July 1976, The Kissinger Transcripts: A Verbatim Record of US Diplomacy, 1969-77, DNSA, ProQuest Document ID: 1679082605.

[85]Anonymous, 'Debate over Computers to China', *The New York Times*, 19 October 1976, 77; Cable, US State Department, 'CDC Seismic Computer for PRC', 22 October 1976, Doc. No.: 1976STATE262677, NARA AAD; Cable no. 68 from Ambassador Ogawa to Minister of Foreign Affairs, 'Beikoku No Taichu Konpyuta Yushutsu Mondai (C) (Issues like US Computer Exports to China (C))', 14 January 1977, 2014-2324, DAMFAJ; Cable no. 1967 from Ambassador Ogawa to Minister of Foreign Affairs, 'Koumoto Tsusan Daijin Hochu (Minister of International Trade and Industry Koumoto visited China)', 17 November 1975, 2014-2323, DAMFAJ.

[86]Song, 'Economic Normalization', 215.

[87]Leslie H. Gelb, 'U.S. Agrees to Sell China a Computer with Defence Uses', *The New York Times*, 29 October 1976, 1.

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the French government requested five cases of computer exports to China totalling over US$1.22 million, while the British government only requested one.[88] The French saw little risk in technology transfer to China because they believed that, among the 'four modernisations' the Chinese government was aiming to achieve by the year 2000, military modernisation came last, only after modernisations in agriculture, industry, and science and technology. The French government even espoused military technology transfer. French officials told the US State Department in October 1977 that they were 'seriously and actively' debating 'a program of military sales to China'.[89]

The French outshone the British in promoting technology exports to China. For that, Britain needed cooperation from the United States in the COCOM. In October 1977, Governor of the British Broadcasting Corporation Ralph Murray told representatives from the US State Department that disagreements between the US and British governments over export controls on China would cause friction in Anglo-American relations, partly because the British government was under enormous pressure from British tech companies, which expected the relaxation of export controls and might blame the government for losing business chance with China.[90] Jimmy Carter, however, in his first year of presidency in 1977, prioritised US-Soviet détente and maintained the even-handed export control policy on China and the Soviet Union. Cooperation between Britain and the United States in relaxing COCOM export controls on China did not go smoothly as a result.

At the same time, the new generation of Chinese leaders needed more imports of modern technology, the lever to shift the nation's goal from revolution to development. The Ministry of Foreign Trade of China refuted the argument that '"self-reliance" and "learning from foreign countries" were contradictory' and proclaimed that 'doing well in technology imports would facilitate a strong modern socialist country'.[91] In December 1978, the Third Plenum of the Fourth CCP Central Committee stressed the significance of science and technology and underscored international cooperation and foreign technology absorption, especially in computer science.[92] In April 1978, the Ministry of Foreign Trade announced its intention to import technologies 'from other countries with which [we] have established diplomatic relations rather than from the United States under comparable trade conditions'. The Chinese expected that US corporations might be able to persuade the US government to facilitate and expedite export licenses for modern technology. The Ministry of Foreign Trade avowed to 'purchase necessary products and technologies [from the United States] by fully exploiting the conflict between the US government and US businesspeople, who long to profit from exports to China'.[93]

The Chinese were redoubling their efforts to internalise foreign technology to accelerate economic development. Chinese leaders particularly advocated the development of the electronic industry and promoted the application of electronic products like computers in various fields, such as telecommunication, radar, and medicine. The computer became one of the symbols of modern science and technology in China. In the Science and Technology Development Plan for 1978-85, the Chinese Academy of Sciences and the State Commission on Science and Technology

[88]'Exportation vers les pays communistes d'Europe et d'Asia des products figurant sur la liste internationale no. 1 (Export to the Communist Countries of Europe and Asia of Products Appearing on International List no. 1)', 1976, 2014-2333, DAMFAJ; 'United Kingdom Export of Strategic Goods to the Soviet Bloc and China', 7 July 1977, 2014-2333, DAMFAJ.

[89]'Record of Anglo-US Consultations on Asia, Foreign and Common Wealth Office, London 26/27 October', 28 November 1977, FCO 21/1545, Foreign Office Files for China, 1919-80, AD AMD.

[90]Ibid.

[91]Chinese Ministry of Foreign Trade, 'Zuohao Jishu Yinjin Gongzuo Wei Jianshe Shehui Zhuyi Xiandaihua Qiangguo Zuochu Gongxian (Contribute to the Construction of a Modernised Socialist Country by Doing Well in Technology Introduction)', B246-3-495-306, SHMA.

[92]Zhonggong Zhongyang Wenxian Yanjiushi, ed., *Sanzhong Quanhui Yilai Zhongyao Wenxian Xuanbian* (Selected Important Documents since the Third Plenary Session of the Central Committee), (Remin Chubanshe, 1982), vol. 1, 3, 6.

[93]Chinese Ministry of Foreign Trade, 'Zhongmei Maoyi Qingkuang (Sino-US Trade Situation)', 21 April 1978, 235-2-163-063-065, GDPA.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

listed computer science as one of eight key areas, whose application could improve industrial productivity, both in physical and mental labour.[94] The new technology policy necessitated more computer imports.

The Chinese government's new policy heartened capitalist countries. In October 1977, the Shanghai Bureau of Instrument and Telecommunication Industry applied to purchase complete sets of equipment and prototypes, worth US$305 million—microcomputers, external storage devices, large-scale integrated circuits, and colour picture tubes—from the United States and Japan for the development of the electronics industry.[95] In March 1978, the National Planning Commission and the National Basic Construction Commission issued the '1978 Plan for the Introduction of New Technologies and Complete Sets of Equipment', allocating US$8.56 billion to technology imports, nearly doubling the US$4.3 billion budget in the Four-three Plan of 1973. As the Chinese spent US $7.8 billion in technology imports, this plan, which covered multiple industries, from petrochemicals to metallurgy to electronics, was called the '7.8 billion plan' (*qi ba yi jihua*). Meanwhile, exchanges in science and technology burgeoned.[96] In 1978 alone, the Shanghai Municipal Science and Technology Committee held nearly 200 academic presentations and organised over 100 technological symposiums with foreign technicians, including many overseas Chinese.[97] Chinese leaders, both at the central and local levels, passionately implemented the policy of technology imports.

China's imports of US computers, however, encountered difficulties as US allies quibbled over the COCOM license procedure. In July 1978, the Carter administration permitted IBM's export of a 370/138 computer system to the Shenyang Blower Works and submitted a license application to the COCOM.[98] The Japanese delegate nonetheless averred that the Japanese government, not the US government, was qualified for the application, for the main parts of IBM 370/138—the control processing unit, power unit, and disk storage and control—were all manufactured outside the United States, and assembled by IBM Japan.[99] The West Germany government backed the Japanese government, citing similar incidents between IBM's US headquarters and West German subsidiary.[100] That September, the US government temporarily withdrew its request for IBM 370/138. IBM Japan then asked the Japanese government to request the COCOM license, and the COCOM approved it.[101]

[94]Zhonghua Renmin Gongheguo Kexue Jishu Bu Chuangxin Fazhan Si, ed., *Zhonghua Renmin Gongheguo Kexu Jishu Fazhan Guihua Gangyao (1956-2000)* (Outline of the Science and Technology Development Program of the People's Republic of China (1956-2000)), (Kexue Jishu Wenxian Chubanshe, 2018), 109-10, 122.

[95]Revolutionary Committee of Shanghai Instrument and Telecommunications Industry Bureau, 'Guanyu Shenqing Yinjin Chengtao Shebei Jiakuai Dianzi Gongye Fazhan De Baogao (Report on the Application for the Introduction of Complete Sets of Equipment to Accelerate the Development of the Electronics Industry)', 28 October 1977, B103-4-816-16, SHMA.

[96]Donglin Chen, '20 Shiji 50-70 Niandai Zhongguo De Duiwai Jingji Yinjin (China's Introduction of Foreign Equipment and Technology in the 1950s and the 1970s)', *Shanghai Xingzheng Xueyuan Xuebao* (Journal of Shanghai Administration Institute) 5, no. 6 (2004): 71-2.

[97]Shanghai Science and Technology Commission, 'Guanyu Tong Laifang De Guowai Keji Renyuan Jinxing Xueshu Jiaoliu Huodong De Jidian Yijian (Some Opinions on Academic Exchanges with Foreign Visitors in the Scientific and Technological Field)', 3 April 1979, B1-8-16-57, SHMA.

[98]'Memorandum From the President's Special Adviser for Science and Technology (Press) to President Carter', 10 October 1977, *Foreign Relations of the United States* (hereafter, FRUS), *1977-80*, vol. 13, ed. David P. Nickles (United States Government Printing Office, 2013), 256-7; Memorandum, US National Security Council, 'Evening Report', 3 March 1978, NLC-26-1-2-2-8, RAC, JCL; 'EA/PRCM Weekly Status Report', 6 July 1978, Doc. No.: 1978STATE170889, NARA AAD.

[99]Export Division, Trade Bureau, Ministry of International Trade and Industry, 'Bei Seifu No Chugoku Muke Densanki (IBM Sha) No Tokunin Shinsei Ni Tsuite (US Government's Application for Special Approval of IBM Computer Export to China)', 4 September 1978, 2014-2349, DAMFAJ.

[100]Cable no. 2159 from Ambassador in France Kitahara to Minister of Foreign Affairs, 'Beikoku No Chugoku Muke Densanki No Tokunin Shinsei (Kokomu) (D) (Application for Special Approval of US Computers for China (COCOM) (D))', 15 September 1978, 2014-2349, DAMFAJ.

[101]COCOM Doc. (78) 598.2, 'Note by the Chairman on Proposed United States Export of a Computer System to China', 4 September 1978, 2014-2349, DAMFAJ.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

To the China government's irritation, however, IBM did not ship IBM 370/138 to China until March 1980 due to administrative delays.[102]

It became increasingly clear that COCOM regulations on technology exports to China were outdated. Capitalist countries applied for COCOM *exception* exports to China more frequently, including British sales of Harrier fighter jets in 1979. In November 1978, West Germany requested an export of Siemens 7.760-K computer systems to Chinese universities. Japan reluctantly approved this case because it had no compelling reason to oppose it.[103] As the COCOM export control system became hollow, the Japanese government lamented that 'countries like the United States and Britain prioritised their diplomatic goals over the COCOM procedures'. It chose to 'calmly accept' the US and British position on treating China preferentially in export licence reviewing, seeking 'flexible measures based on the situation' while 'appealing for compliance with COCOM procedures'.[104]

With the normalisation of US-China relations in 1979, the US government increased its efforts to export technologies to China. When Deng Xiaoping visited Washington in January 1979, Carter guaranteed that 'if an advanced computer . . . is certified by our Secretary of Commerce, Mrs. Kreps, to be used for civilian purposes only, then there would be no problem with the sale of this type of equipment'. To circumvent the strict controls on computer exports, Carter proposed a long-term lease. Deng found this method acceptable.[105] During his visit, Deng signed a government-to-government agreement on cooperation in science and technology with Carter, followed by several reciprocal visits in the following months aimed at building the framework for this cooperation.[106] In July 1979, Secretary of Commerce Juanita Kreps visited China to sign the US-China trade agreement, for which she and Minister of Foreign Trade Li Qiang had negotiated for two months. This agreement, approved by Congress on 14 January 1980, granted China most-favoured-nation status.[107]

The high-level exchanges resulted in numerous specific initiatives involving US tech companies. GE, for example, approached the Shanghai municipal government for cooperation in producing twelve-inch black and white televisions in September 1979. GE also promised to the Shanghai Bureau of Instrument and Telecommunication Industry that it would upgrade factories in Shanghai, many of which operated on outdated Soviet technology, with its modern technology and equipment, and send experts for technical training. In return, GE expected these factories to supply televisions for US customers from 1980.[108] GE's deal was just one example of US efforts to develop manufacturing industries in China, rich in cheap labour and capable of producing inexpensive goods for American customers, who suffered from returning inflation after the second oil shock.

[102]'No Headlines in Original', *PR Newswire*, 31 March 1980. LexisNexis, https://advance.lexis.com/api/document?collection=news&id=urn:contentItem:3SJB-0430-000D-80FH-00000-00&context=1516831.

[103]Cable no. 2283 from Ambassador in France to Minister of Foreign Affairs, 'Doku No Taichu Konpyuta No Reigai Yushutsu (Kokomu) (78-1004) (Exceptional German Computer Exports to China (COCOM) (78-1004)), 17 November 1978, 2014-2349, DAMFAJ.

[104]Cable no. 3076 from Ambassador Ikawa to Minister of Foreign Affairs, 'Kokomu Lisuto Revu (Shokan) (B) (COCOM List Review (Opinion) (B)), 21 December 1979, 2014-5643, DAMFAJ.

[105]'Memorandum of Conversation', 30 January 1979, *FRUS, 1977-80*, vol. 13, ed. David P. Nickles, 776.

[106]'Visit of Vice Premier Deng of China: Agreement between the United States and China on Cooperation in Science and Technology, January 31, 1979', in *The Public Papers of the Presidents of the United States: Jimmy Carter, 1979*, vol. 1 (US Government Printing Office, 1980) 200-2; Memorandum, Michel Oksebberg, 'China: Goals for the Year and Calendar Ahead', 9 January 1979, NLC-26-32-6-5-6, RAC, JCL; Chinese Ministry of Foreign Trade, 'Jiedai Meiguo Shangwu Buzhang Jianbao (5) (Receiving a Briefing from the US Secretary of Commerce (5)), 9 May 1979, B170-3-601, SHMA.

[107]Kailai Huang, 'American Business and Normalization of US-China Commercial Relations, 1979-80', *Essays in Economic & Business History*, 23 (2005): 116-19.

[108]Shanghai Instrument and Telecommunications Industry Bureau, 'Jiedai Meiguo Tongyong Dianqi Gongsi Daibiaotuan Qingkuang Baogao (Report on the Reception of American General Electric Company Delegation), 27 September 1979, B1-9-67-47, SHMA.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

At the same time, the US government showed flexibility to its allies' technology exports to China, as it was concerned that market competition and the absence of cooperation in export controls continuously harmed US-China technology trade. In February 1979, the State Department approved a new policy on third-country sales to China, which suggested that US allies should 'come to [the United States] bilaterally at the highest political level' to discuss sales of sensitive items while 'avoiding discussion in the COCOM or the NATO of any special arrangement for China export controls'.[109] While maintaining an even-handed policy toward China and the Soviet Union on the surface, the US government, in practice, began to negotiate with its allies on a case-by-case basis to ensure that technology exports to China posed no security risks to the capitalist bloc. The US government emphasised maintaining a low level of technological sophistication in exports and implementing effective safeguards to prevent military applications of the technology.

With the deterioration of US-Soviet relations in 1979, Carter had no reason to maintain the even-handed trade policy. Senator Paul Nitze and numerous other détente critics criticised Carter's conciliatory attitude toward the SALT II talks and called for reinforced containment of the Soviet Union. Wary of expanding Soviet military power, the Carter administration abandoned détente and embarked on a major military buildup, including construction of bases in the Persian Gulf region in mid-1979.[110] During his August 1979 visit to China, Vice President Walter Mondale informed Chinese leaders of the US government's determination to ease export controls in several areas of advanced technologies—tantamount to a 'China tilt'.[111] Two months later, the Defence Department revised the internal guidelines to differentiate the handling of export requests for China from those for the Soviet Union. It would review licensing applications case by case, but would now take into account 'the predictable impact on the military balance and the significance of that impact to the national security of the United States or any other country in which the United States had vital interests'.[112] The Defence Department, in other words, would agree to export certain sophisticated computers to China, but not to the Soviet Union, for security reasons. China was no longer a security threat, at least on the same level as the Soviet Union.

The 'China tilt' assisted US computer exports to China. Chinese officials and scientists prioritised the United States as a partner in developing Chinese computer science, recognising its position at the forefront of global technology. In January 1979, the Chinese National Scientific and Technological Commission proposed establishing computer research centres across the nation. Among regional-level centres, the East China Institute of Computer Technology came to be equipped with two IBM 3032 computers, worth US$15 million, imported from the United States. IBM 3032 boasted a computational speed of three million operations per second, enabling the research centre to deliver high-quality, high-speed data processing services for major engineering and scientific projects.[113] China's computer science began to flourish through increased technology imports.

The 'China tilt' was also a boon to US allies, particularly Japan. In August 1979, National Security Advisor Zbigniew Brzezinski briefed Director-General of the Japanese Defence Agency Yamashita Ganri about Walter Mondale's upcoming visit to China, where he would convey the US government's decision to sell sensitive technologies to the Chinese, which should not be

[109]Memorandum, Peter Tarnoff, 'Third Country Sales to China', 6 February 1979, NLC-26-33-1-6-9, RAC, JCL.

[110]Walter LaFeber, *America, Russia, and the Cold War, 1945-2006*, 10th ed. (Cornell University Press, 2008), 312-15.

[111]'Options for More Favorable Treatment for China Than for USSR In COCOM Export Controls', 10 October 1979, NLC-26-25-7-8-1, RAC, JCL.

[112]US Defence Department, 'Interim DOD Policy for Export Control of US Technology', October 1979, NLC-26-35-3-7-5, RAC, JCL.

[113]'Shanghaishi Jihua Weiyuanhui, Shanghaishi Kexue Jishu Weiyuanhui, Shanghaishi Geming Weiyuanhui Jiaoyu Weisheng Bangongshi Guanyu Choujian Huadong Diqu Jisuan Zhongxin De Qingshi Baogao (Request of Shanghai Municipal Planning Commission, Shanghai Municipal Science and Technology Commission, Shanghai Municipal Revolutionary Committee Education and Health Office on the Preparation for the Establishment of the East China Regional Computing Centre)', 14 March 1979, B1-8-15-132, SHMA.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

transferred to a third country. To seek support from the Japanese government, Brzezinski emphasised the importance of China to the geopolitical strategy, depicting Sino-American and Sino-Japanese relations as the 'outer core' of Far Eastern security, almost as important as US-Japanese relations. Yamashita concurred. He reported that a Chinese delegation led by Liao Chengzhi, an old Japan hand and vice chairman of the standing committee of the National People's Congress, who dedicated his career to deepening Sino-Japanese relations, had visited Japan two months before to strengthen bilateral economic ties.[114] Carter's 'China-tilt' ushered in the golden age of the US-China-Japan triangle.[115]

The US government further promoted the 'China tilt' in the COCOM. In August 1979, the NSC discussed the possibility of adopting a pro-China differential in the COCOM, which had already been informally suggested by Belgium.[116] The State Department examined the record of past precedents in the COCOM, including a special *exception*-export procedure for items in the COCOM industrial list, adopted for Poland in 1957 and later proposed by the US government for Romania in 1978. Secretary of State Cyrus Vance found this procedure feasible for China since it 'respected the existing COCOM procedures but maintained a case-by-case review' of *exception* exports to certain communist countries. He prompted Carter to negotiate the special procedure for China with US allies in February 1980, after Congress approved the US-China Trade Agreement and ratified the SALT II Agreement—although the latter never actually happened.[117]

The Soviet invasion of Afghanistan in December 1979 resulted in a COCOM consensus on adopting the 'China tilt'. In March 1980, the US government submitted a COCOM proposal to promote the 'China tilt' in response to the Soviet aggression.[118] Other COCOM members like Norway and the Netherlands promptly endorsed the US proposal at the COCOM meeting on 15 April 1980. Although advocating for further discussions on the 'China tilt', the French delegate sought the US government's approval for three export licenses to China, which were previously pended in the COCOM due to the US government's reservations.[119] Capitalist countries, in essence, reached a consensus on the 'China tilt' as the new guiding principle in the COCOM export control policy.

Conclusion

As data from the US Commerce Department suggests, the percentage of computers in the total export licenses for China processed in 1979 amounted to 22%, ranking first in all high technologies. Two years later, the number doubled as the Reagan administration processed 41% of licenses for computer exports to China.[120] Japan, a strong competitor to the United States, sought to export more computers to China than it previously did. Despite two-year-long negotiations over export controls, in May 1982, Tokyo and Washington agreed to approve the export of the

[114]Memorandum of Conversation, 'Summary of Zbigniew Brzezinski's Discussion with Japan Defence Minister Ganri', 17 August 1979, NLC-26-34-6-5-4, RAC, JCL.

[115]See Ezra F. Vogel, Yuan Ming, and Tanaka Akihiko, *The Golden Age of the U.S.-China-Japan Triangle, 1972-89* (Harvard University Asia Center, 2002).

[116]Memorandum, Mike Oksenberg and Ben Huberman, 'Sensitive Exports to the PRC: VBB Meeting August 14', 13 August 1979, NLC-26-34-5-18-2, RAC, JCL.

[117]Memorandum, Cyrus Vance, 'For the President', 28 December 1979, NLC-26-26-1-4-9, RAC, JCL.

[118]COCOM Doc. PROC. (80) 5, 'Record of Discussion on a United States Proposal to Institute a Special China Procedure', 10 April 1980, 2014-3562, DAMFAJ.

[119]Cable no. 932 from Ambassador Ikawa to Minister of Foreign Affairs, 'Kokomu (Taichu Yugu Shochi, Kaigi Hokoku) (B) (COCOM (Favourable Treatment Toward China, Meeting Report) (B))', 16 April 1980, 2018-1154, DAMFAJ.

[120]Memorandum, John M. Marcum, 'Technology Transfer Policy for China', 31 March 1983, RAC Box 18, George A. Keyworth II Files, Ronald Reagan Library.

https://doi.org/10.1017/S174002282500004X Published online by Cambridge University Press

Hitachi M-180 and the equally advanced IBM-3033 to China, both of which were sophisticated enough to facilitate nuclear development.[121]

China's integration into global capitalism continued. In April and May 1980, COCOM members debated how to promote the 'China tilt'. France agreed to treat China favourably in licence reviewing and recommended applying this treatment to the exports of both equipment and technology.[122] Underscoring the risks of technology diffusion, Japan advocated careful examinations of safeguards in *exception* exports to China.[123] Other countries like Denmark, Portugal, and the Netherlands insisted on restricting favourable treatment of export licensing to China alone, with no exception for other export destinations.[124] COCOM members were searching for a balance between economic benefits and national security in adjusting export controls on China.

Capitalist countries pursued varying strategies in dual-use technology trade with China. Western European countries and Japan sought to dominate the China market with advanced technologies, including computers, and shared methods for mass production through industrial exhibitions and scientific exchanges. The United States, though a latecomer to the China market, leveraged its leadership in COCOM to relax export controls on China. Dual-use technologies like the computers were particularly sought after by the Chinese for their modernisation efforts, but capitalist countries were cautious about exporting these technologies, fearing potential security risks. Capitalist countries' technology export to China enhanced their mutual trust in strategic and political matters, transcending Cold War divisions.

Dual-use technologies have long played a significant role in shaping global trade and international relations. Historians often depict them as sources of division, emphasising how great powers competed for technological dominance and restricted rivals' access to advanced technologies for military purposes. However, dual-use technologies have also acted as catalysts for cross-border or cross-bloc collaboration, underscoring the intricate balance between economic ambitions and security concerns. Export controls have been significant in managing these dynamics, functioning as a double-edged sword that can either intensify geopolitical tensions or foster trust and interdependence when relaxed. By regulating the flow of dual-use technologies, countries seek to mitigate security risks while pursuing economic gains, often necessitating multilateral cooperation to align competing interests. These efforts highlight the enduring impact of technologies on trade and geopolitics.

Acknowledgement. I would like to extend my sincere thanks to anonymous reviewers and to Associate Professor Kazushi Minami for their insightful comments, which greatly improved this article. I am also grateful to Professor Pi Cui and to the participants of the 2023 COCOM Workshop at East China Normal University for their valuable suggestions.

Competing Interests. The author declares none.

Financial Support. None to declare.

[121]Cable no. 3200 from Ambassador Okawara to Minister of Foreign Affairs, 'Taichu Yushutsu Kanri Seisaku (Export Control Policy on China)', 30 April 1982, 2014-0409, DAMFAJ; 'Ogata Densanki No Taichu Yushutsu Nichibei Ga Sogo Ni Kaikin (Mainframe Computer Exports to China, US and Japan Mutually Lifted Restrictions)', *Asahi Shimbun*, 23 May 1982, 9.

[122]COCOM Doc. PROC. (80) 5, 'Record of Discussion on a United States Proposal to Institute a Special China Procedure', 10 April 1980, 2014–3562, DAMFAJ.

[123]Cable no. 1081 from Ambassador Ikawa to Minister of Foreign Affairs, 'Kokomu (Taichu Yugu Shochi, Kaigi Hokoku) (B) (COCOM (Favourable Treatment toward China, Meeting Report) (B))', 30 April 1980, 2018-1154, DAMFAJ.

[124]Cable no. 1006 from Ambassador Ikawa to Minister of Foreign Affairs, 'Kokomu (Taichu Yugu Shochi, Kaigi Hokoku) (B) (COCOM (Favourable Treatment toward China, Meeting Report) (B))', 24 April 1980, 2018-1154, DAMFAJ; Cable no. 1081 from Ambassador Ikawa to Minister of Foreign Affairs, 'Kokomu (Taichu Yugu Shochi, Kaigi Hokoku) (B) (COCOM (Favourable Treatment toward China, Meeting Report) (B))', 30 April 1980, 2018-1154, DAMFAJ.

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Cite this article: Gong B., 'Computers for China: Technology Trade and the Transformation of the Cold War in East Asia, 1968-80', *Journal of Global History* (2025). doi:10.1017/S174002282500004X