The Case of Israel's Technology Transfers as Tools of Diplomacy in East Asia

David Tooch

For decades, Israel has grappled with efforts by adversaries to keep it politically isolated in the international arena. To expand the Jewish state's diplomatic reach, Israeli leaders undertook to share specialized knowledge with other nations. The technologies offered were initially devised to contend with Israel's distinctive security and developmental struggles. In the early years of the sharing initiative, technology transfers were mostly confined to fields related to agriculture and the military. In more recent years, the rise and success of Israel's hi-tech industry has attracted attention from governmental and private interests at major technology sectors across Asia. Israel's technology boom has created opportunities for Israeli policy makers to shape new and expanded international partnerships. The article explores the usefulness of know-how sharing in the making and boosting of Israel's ties in East Asia. It examines Israel's technology transfers as tools of diplomacy in terms of propping up trade ties, cultivating robust bilateral exchanges, and, at times, softening the policies of pivotal Asian nations like China toward Israel in the context of the conflict with the Palestinians. The article also looks at how specialized knowledge sharing might reveal subtexts in ties between the technology sender (Israel) and the technology consumer (recipient partner nation).

Technology Transfer Receiver Motivations

One of the main motivations behind initiating technology transfers is the desire by the technology seeker, like the People's Republic of China (PRC), to boost the pace of its development, which would otherwise not likely materialize organically. The technology transfer can offset technological gaps that can obstruct economic growth. Leong Chan and Tugrul U. Daim correctly describe technology transfers as "shortcut" pathways for countries like the PRC to speed up the pace of their technological development capabilities.[1]

Israel and China

The PRC can offer much in the way of strategic, economic, and diplomatic clout to other countries through bilateral partnerships. Such opportunities are of pronounced significance in the case of small nations like Israel, which seek to broaden international ties Yet despite China's decades of refusing formal ties with Israel, the Israelis and Chinese established robust bilateral relations. The realized tighter Sino-Israeli ties partially can be attributed to the sharing of specialized knowledge. From the absence of formal ties to billions of dollars in trade, this article traces a reversal of fortune in Israel's diplomatic reach in East Asia, mainly with China.

Toward Formal Ties

Since the late 1970s, China has experienced significant socioeconomic changes with a transformation into a "mixed" market economy that includes both state- and nonstate-owned enterprises. Policy shifts in the PRC in 1970s meant longstanding communist dogmas were discarded, and China increased its openness to the outside world. This meant policy makers in Beijing could consider a broader range of external sources of technologies with which to tackle some of the PRC's most pressing issues.[2] The PRC's wave of changes aimed at undertaking modernization in four distinct areas: industry, agriculture, science/technology, and defense.

For decades the PRC was dogged by a collection of challenges in food production, national security, and other areas. Understanding such adversities is pertinent in grasping the significance of technical cooperation in the making of Sino-Israeli relations.

China's rapid growth, coupled with Israel's zeal to extend its diplomatic reach, offered opportunities with which to initiate and advance bilateral dialogues between the two countries—albeit quietly at first. Israel's record of overcoming developmental and security issues drew Chinese decision makers to take interest in the technical exploits of the Jewish state.

China's Developmental Challenges

Food Production

China's territory is vast, but it includes large swaths of rugged, arid, and semi-arid landscapes. These physical realities, together with population growth, have diminished the PRC's ability to output suitable quantities of foodstuffs. In separate works, Gregory Veeck and L. Jin & W. Young point out some key problems in the PRC's agriculture sector are not confined only to food supply concerns but also touch on socioeconomic settings that include income stagnation (especially

in grain-dependent farming areas).[3] Dry land conditions are but one in a set of problematic dynamics that faced many subsistence farmers in China, who endeavored to produce more-desirable fruits, vegetables, meat, poultry, and grain. Additional impeding factors include ineffective management issues. Thus, the introduction of more effective management methods and new technologies to overcome water scarcity was an essential part of efforts to increase food production potential in China. This could also help boost farmer revenues that could by extension alleviate poverty and advance overall rural development in China. Veeck points out that advances in farming techniques in the PRC have helped achieve improvements in the agriculture sector, which in turn raised overall living conditions in less developed rural areas.[4] This underscores the profound significance of agriculture in the economic well-being of millions of Chinese citizens.

National Security

Beijing's multifaceted national security quandary posed tough questions for China given the number of regional disputes facing the PRC. China has a history of disagreements with neighboring countries, extending decades, if not longer. One such stark example is the political rift that emerged between Beijing and Moscow in the 1960s, which spurred border tensions. Besides frictions on the Soviet frontier, China was also a party to an assortment of territorial spats, some of which remain unresolved in present times. Concerns about security matters have helped create opportunities for Sino-Israeli military contacts.

The Central Intelligence Agency notes a wide-ranging roster of territorial quarrels that have direct associations to the PRC. These include political differences with neighboring India over territory in the Himalayas and nuclear proliferation issues. Also, China's southwestern Yunnan province has experienced smuggling border breaches from Burma (Myanmar) stemming from drug-trafficking activities. Furthermore, the PRC asserts rights to islands in the South China Sea, but these claims have been challenged by Taiwan, Vietnam, and Japan. There are also territorial disagreements between China and North Korea over border rivers such as the Yalu and Tumen. Additionally, Beijing must cope with domestic unrest mostly in western regions of the country.

Against a backdrop of perils faced by the PRC and steps toward wider contacts with the international community, China and Israel began to renew contacts, which were previously dormant, or at best erratic, for decades. The advent of more flexible foreign policies perhaps played a part in the PRC's interest in the Israeli pavilion at the Paris Airshow in 1975, which featured mostly military hardware. The Chinese delegation's visit to Israel's display set the stage for a string of future contacts in the form of quiet military and technology centered dialogues.

In the 1980s, contacts intensified between the two countries as they moved closer to the start of full formal ties. It is interesting to note that the first face-to-face high-level encounter between officials from Israel and China was distinctly technology related. In 1985, the science ministers of China and Israel met at a conference in the United States. Such an informal interaction was perhaps a stepping stone in a series of technical themed meetings that followed from the mid-1980s onward. This included, for example, a then secret visit to Israel by a Chinese delegation in 1985 to discuss prospects of technical joint ventures. But even as such quiet but constructive exchanges took place between the two countries, Chinese officials and state media routinely continued to describe Israel and its policies in punitive terms. Similar tones by China toward Israel extended to international forums like the United Nations, where also in 1985 the Chinese ambassador, Li Luye, speaking about the Israeli-Palestinian conflict said, "The policy of aggression and expansion pursued by the Israeli authorities has brought untold sufferings to the Palestinian and other Arab peoples and has created long-term tension and turbulence in the Middle East, thus posing a grave threat to world peace."[5]

As contact between Israel and China advanced, perhaps the opening of the Israel Academy of Sciences and Humanities office in Beijing just before the launch of formal diplomatic ties best exemplified the significance of technical cooperation in driving Sino-Israeli ties.

Diplomatic Relations (Formal Ties)

After full diplomatic relations became a reality, technical cooperation between China and Israel significantly increased. The first decade of formal ties, starting in the early 1990s and stretching into the early 2000s, saw considerable growth in military and agricultural ties. In 1993, just a year after the exchange of embassy openings, the first in a series Sino-Israeli demonstration farms opened. This and other similar farms featured agricultural techniques practiced in Israel. Relations between the two countries have blossomed through a combination of government-to-government and other forms of interactions, as technology and knowledge sharing have emerged as noteworthy components of bilateral dialogues. Dan Levin suggests Israeli statesmen were quietly hopeful that sharing Israel's experiences and technologies would help garner some Chinese government support for the Jewish state in international arenas.[6] Nevertheless, whether with or without open political support, China's willingness to do business with Israel was a particularly attractive prospect, especially against the background of successive efforts by adversaries to delegitimize and isolate Israel.

Generally, bilateral ties experienced growth—but not without limitations and questions raised about Israel's capacity to fulfill already sealed arms deals with the

PRC. Furthermore, Israel's relationship with China was the source of contentious exchanges between American and Israeli officials. American concerns about the extent of the Sino-Israeli relationship continue to resonate today. While Sino-Israeli relations have suffered setbacks from time to time, they were not permanently damaged because of any one specific issue.

However, as June Teufel-Dreyer points out, China was susceptible to minority separatism in autonomous regions like Xinjiang, Tibet, and Inner Mongolia.[7] After the 9/11 attacks against the United States, groups associated with radical Islam became the center of China's antiterror security attention—mostly in Xinjiang, where millions of ethnic Muslim Uighurs reside. Degang Sun suggests groups with ties to international jihadist organizations have challenged the legitimacy of Beijing's authority in Xinjiang and, thus, are posing security threats in western China.[8] Paul J. Smith asserts the 9/11 attacks drew the United States and China closer to cooperate on common counterterrorism interests.[9] Nevertheless, China's cooperation in combating terrorism also extends to other international partners (like Israel), who in the eyes of Beijing can deliver helpful combat knowledge and experiences. On that point, Liang Pingan notes China's efforts to fight extremist groups go beyond immediate security itself and extend to collaboration in utilizing tools like technology, intelligence, and training techniques to mitigate threats.[10] Degang Sun notes that China has engaged in bilateral antiterror cooperation with India and Israel, ranging from tactical cooperation, extradition, and academic exchanges to antiterror equipment sales.[11] However, in 2011 relations between China and Israel gained new significance with the outbreak of the Arab Spring. Outbursts of unrest created worrisome political and military instability across the Middle East and North Africa. The uprisings placed Chinese interests in the region at risk. The troubles prompted reassessment in Beijing about China's ties in the region and specifically with Israel. By this time, strains in Sino-Israeli relations over canceled arms deals diminished, and Chinese policy makers sought to learn whatever possible about the changing dynamics in the Middle East and North Africa and considered improved ties with Israel to be helpful in this endeavor.

In the same year (2011), bilateral exchanges rose as the Arab Spring created mounting uncertainties about China's interests in the Middle East. Of particular note in that year was the first ever visit of a Chinese military chief to Israel. People's Liberation Army general Chen Bingde's visit to discuss defense cooperation was not necessarily in contradiction with a change in Israeli policy about the cessation of technology transfers to the Chinese military. This is the case as discussions could center on collaborations that excluded the export of defense hardware but included the sharing of other forms of knowledge—like training tactics

Beyond 2011, Beijing's renewed interest in Israel strengthened bilateral relations between Israel and China in the form of joint academic and nontechnology ventures. In 2013, the Israel Institute of Technology (Technion) opened the first Israeli university campus (the Guangdong Technion–Israel Institute of Technology) in Shantou, in the Guangdong province of southeastern China. The newly formed university is a collaboration between the Technion and Shantou University.

This helped to refresh the tough-to-build ties between Israel and China that were blemished but not permanently damaged as a consequence of cancelled arms deals in response to American pressure. Cooperation in areas like agriculture and other nonmilitary areas tended to strengthen. Conversely, Israeli exports to China generally increased as revealed in figure 2. There were also notable increases in the amount of bilateral exchanges as shown in figure 4. Additionally, Chinese officials at the UN have exhibited a softer policy toward Israel as indicated in figure 1. What follows is an analysis of Sino-Israeli relations that seeks to highlight how Israel's technical relations with China may have yielded noticeable gains in areas of trade, bilateral exchanges, and perhaps even minor yet salient policy shifts with regard to the Israeli-Palestinian conflict in recent years.

Sino-Israeli Relations Advance

To gain a better and methodical understanding of Sino-Israeli ties, one must explore the role of technical ties as tools of diplomacy. To that end, the author assessed tens of thousands of documents to determine if there could be any linkage, however loose, between the growth of technical ties and identifiable change in China's Israel policy with regard to the conflict with the Palestinians. The author has examined, with help of content analysis software (NVivo), every publicly available statement by Chinese officials at the UN on the Palestinian issue in the period 1989–2014.[12] The survey found a multitude of frequently used language employed by Chinese diplomats to characterize Israeli policies in either "negative" or "positive/neutral" terms. In instances of positive/neutral language usage, Chinese representatives at the UN tended to denote the participants in the conflict (Israelis and Palestinians) on equal footing, thus avoiding exclusively assigning blame to any one party. In particular, such positive language tends to be used for the purpose of suggesting steps toward a peaceful resolution to the conflict and, in doing so, avoids criticizing Israel outright. Frequently positive/neutral used words in debates about the conflict were found to be *peace*, *coexistence*, *parties*, *constructive*, *process*, and *negotiations*. In contrast, negative language, which mostly framed Israel as the perpetrator of aggressive policies, were found to be *occupied*, *abuse*, *rights*, *activities*, *brutal*, and *aggression*. Figure 1 displays a side-by-side comparison of total positive versus

total negative words, identified by accessing the archives of the United Nations Informational System on the Question of Palestine (UNISPAL).

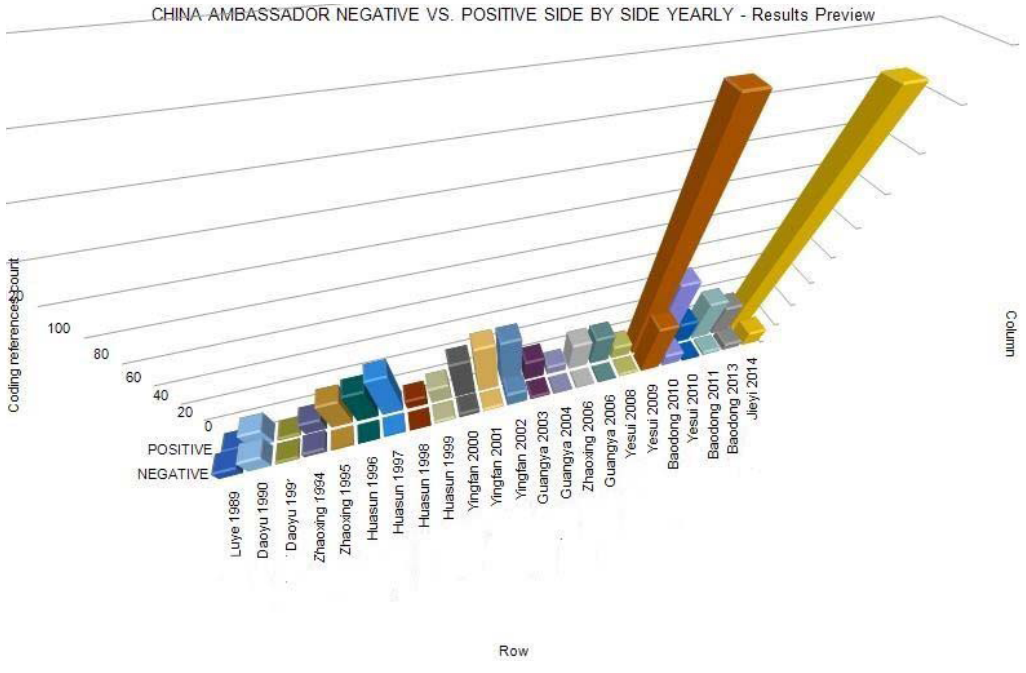

Figure 1. Chinese ambassadors' negative versus positive word frequencies, 1989–2014

Figure 1 illustrates that the usage of negative *and* positive words increased in more recent times. However, interestingly, positive word usage has grown significantly more than usage of negative category words. Put differently, this further enforces a suggestion that in more recent times there has been an overall trend of increased balanced (neutral language) approach by Chinese officials at the UN toward Israel in the context of the conflict with the Palestinians as Sino-Israeli ties experience growth.

China's Political Approach toward Israel and the Middle East

It is important to note that UN voting patterns on Middle Eastern conflict issues and Israel cannot and should not be taken as full testimonies accurately gauging Israel's diplomatic defeats and triumphs. Certainly, the nature of votes in the world body pertaining to Israel and the Israeli-Palestinian conflict say something about attitudes toward Israel, but such votes offer only a partial picture in the case of Israeli relations with China. More importantly, given Israel's record of quiet or backdoor diplomacy, what may matter more goes beyond the number of votes at the UN for or against the Jewish state. It is the moderated rhetoric and

the behind-the-scenes dynamics that are contributing factors in the building and maintaining of resilient bilateral relations. Diplomatic gains may be tacit in the form of quiet joint collaborations. As Rowan Callick notes, Israel gained ground in gradually building relationships with Asian countries, even as a trend of hostile votes against it in international arenas persisted.[13] As tech cooperation increased, this trend maintained (but to a lesser extent) in 2006 in the immediate aftermath of Israel's Harpy drone deal withdrawal, when the volume of both positive (neutral) and negative (critical) words used by Chinese official at the UN were at lower levels than in more recent years.

Trade Indicator: Israeli Exports to China

One of the palpable central indicators of the robustness of Sino-Israeli ties is the flow of Israeli products to the PRC. Figure 2 shows a year-by-year progression of Israeli exports to China as reported by Comtrade (United Nations).

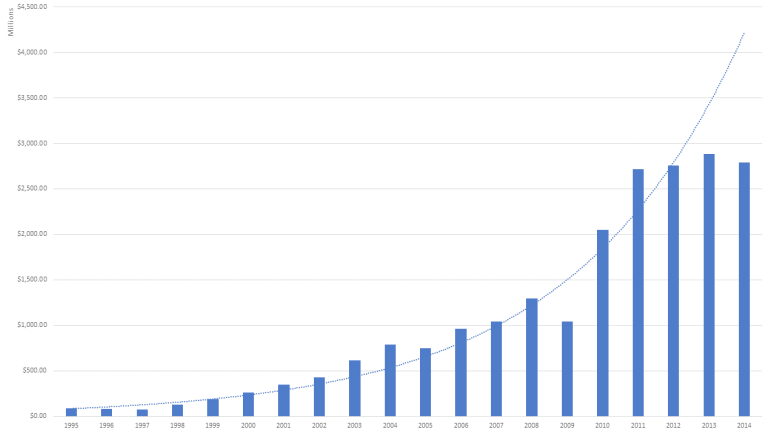

Figure 2. Israeli exports to China, 1995–2014
Source: Comtrade (United Nations)

Figure 2 generally demonstrates a strong growth in Israeli exports to China. Growth is slow in the early years of formal (diplomatic) relations but dramatically picks up pace in more recent years. This upward trend indicates a firming of ties and contrasts previous decades dominated by hidden and/or informal interactions and the absence of formal trade. In the mid-1990s, Israeli technology transfers to the PRC expanded to include aviation-specific military technology. As Israeli tech transfers increase, volumes of Israeli commercial exports to China generally also echoed a tendency of gains (fig. 2).

However, there are also noticeable dotted declines in Israeli exports to China in 1997, 2005, and 2009 in otherwise noteworthy periods of growth in exports. It is unclear why there was a minor drop in 1997. Though, an International Monetary

Fund report points to an overall downturn in the global economy in 1996, which it attributes to a financial slowdown in Asia. Also, in the previous year, China and the United States were at odds over large-scale Chinese military exercises in the Strait of Taiwan, and this may have indirectly curtailed Israeli exports to the PRC. It should be noted that Israeli foreign relations can be subject to quiet political pressures from Washington. In 2005, Israeli exports to China declined as Sino-Israeli relations experienced tensions and political fallout when Israel quit a crucial arms agreement with China. It was widely reported that US pressure was a significant factor in the cancellation of the deal.

Trade volumes shown in figure 2 are likely significantly higher than indicated by the graphic illustration. This can happen because Comtrade figures are based on self-reporting by member states, which typically excludes military transactions/products. States tend to quietly handle arms technology exports. International military deals have been notoriously clandestine undertakings as part of undisclosed partnerships. However, while exports shown in figure 2 do not include armaments, the aborted arms deal may have unintentionally negatively impacted the flow of commercial technologies from Israel to the PRC. This is conceivable because some commercial commodities may be considered "dual-use," meaning they can be converted to military use.

The Stockholm International Peace Research Institute (SIPRI), which tracks international arms transfers, suggests an overall lack of transparency by states in the reporting of arms imports and exports. SIPRI asserts some countries have a history of concealing (not publishing) reports about their international arms transactions. However, SIPRI has published independent statistics about Israeli military export volumes to China. The chart below shows arms export volumes from Israel to China (fig. 3). It is based on SIPRI statistical assessments. The diagram shows the start of exports from 1990 onward because this is the first year data was available on Israeli military transfers to China. The chart clearly shows an abrupt end to Israeli military exports to China after 2001. This reflects Israel's policy change regarding arms transfers to China in the wake of staunch US opposition.

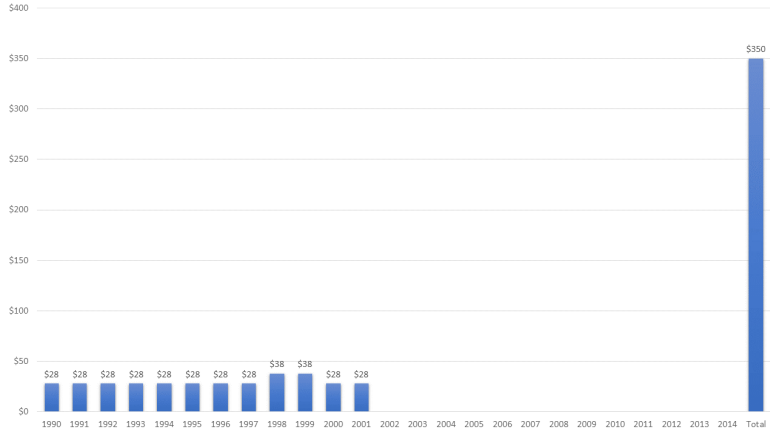

Figure 3. Israeli arms transfers to China, 1990–2014 (in millions of US dollars)

Source: SIPRI

Sino-Israeli Bilateral Exchanges

Bilateral exchanges are another metric utilized to gauge the robustness of diplomatic ties. For the purpose of this study, *bilateral exchanges* are defined as the combined number of mutual visits by officials to each other's countries and the sum of signed bilateral treaties from year to year. Figure 4 shows the number of Sino-Israeli bilateral exchanges.

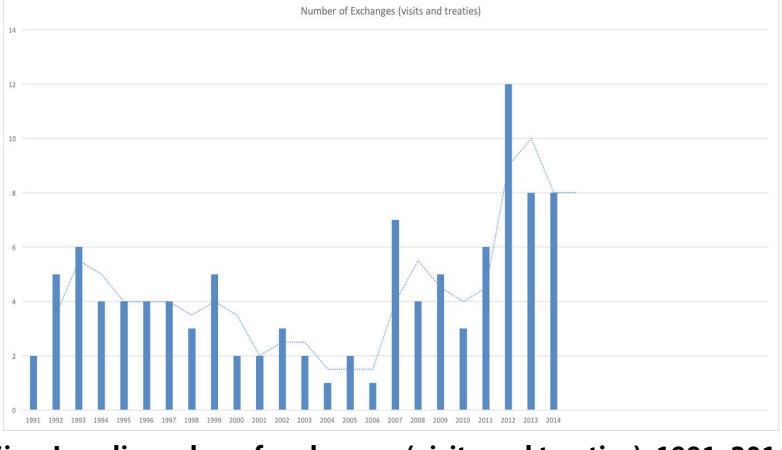

Figure 4. Sino-Israeli number of exchanges (visits and treaties), 1991–2014

Source: Ministry of Foreign Affairs People's Republic of China and Israel Ministry of Foreign Affairs

Figure 4 illustrates the extent of the annual fluctuations in the number of exchanges, but overall it also points to the increase of interactions after the start of formal relations in 1992. Initially there is an upsurge in the number of bilateral

exchanges and also notable decreases in contacts during and after the year 2000. At this time, the United States demanded that Israel stop the sale of the Phalcon Airborne Early Warning System to China, and Israel complied.

The cancellation supposedly damaged Israel's credibility in the eyes of China's policy makers. In 2005, the drone deal pullout unfolded as Israel complied with Washington's fervent opposition. Yet, in 2007, the number of bilateral exchanges surged. Interestingly, the increase of exchanges coincides with Israeli prime minister Ehud Olmert's visit to Beijing in a bid to repair bilateral ties and redirect the trajectory of Sino-Israeli ties away from military technology transfers to civilian-centered technology relations.

During the period from 2012–2014, Israeli exports to the PRC demonstrated a steady upward trend, as shown in figure 2. The number of bilateral exchanges in this time frame is significantly higher in comparison to previous periods in Sino-Israeli relations (shown by figure 4)—which coincides with an increase in technical cooperation.

Also, in this period, as indicated in figure 1, China's language at the UN about the Israeli–Palestinian conflict maintains a higher frequency of positive terms (softer tone on Israel) than negative/critical terms overall.

Summary and Conclusions

China's geography, politico-economic systems, and national vulnerabilities tie in directly and indirectly to the development and growth of Sino-Israeli relations. Following the death of Chairman Mao Tse-tung, China embarked on political and economic reforms. At that time the PRC moved away from orthodox communist principles, gradually shifting from a centralized to a mixed market economy and efforts to modernize key sectors in areas of agriculture, military, and science/technology research. The changes aimed to help advance China's competitiveness in the emerging global economy and boost standards of living. As the PRC's development accelerated, policy makers in Beijing pursued ways to improve China's technological capabilities and grapple with how to increase food production volumes and update an aging military. To that end, China opened itself to wider international engagement, and decision makers began to look outward to the international community for new technologies and know-how. At the same time, Israeli leaders endeavored to establish new contacts beyond traditional allies in the West and turned eastward to East Asia.

Israel's ongoing campaign to minimize its political isolation, coupled with Chinese interest in Israeli technologies in specialized areas like agriculture and military affairs, created a pathway to bring the two countries closer—in a sense creating a convergence of interests. Initially, technical cooperation was a part of

clandestine contacts, which eventually transformed into open dialogues and then advanced to full formal ties. Since the opening of embassies in Beijing and Tel Aviv, there has been significant growth in terms of bilateral exchanges, trade, and cooperation in important sectors. However, hiccups in Sino-Israeli relations in the form of political tussles over aborted arms deals under US pressure created doubt in China about Israel's ability to keep future commitments without Washington's approval. Overall, long-term relations were not harmed, as exports in military hardware were cut and civilian commerce increased. Israel is a relatively small trading partner for China. However, the PRC offered Israel some access to China's mammoth marketplace and new sources of capital for Israeli hi-tech firms and institutions. Israel's robust technical cooperation with Beijing has not significantly impacted the PRC's support for the Palestinian cause in international arenas like the UN, but Israel enjoys strong broad collaboration with China independent of issues related to the Israeli–Palestinian conflict. It would be difficult to deny that technical engagement with China has not produced tangible worthy gains for Israel. Technology transfer engagements have helped create settings that promote bilateral dialogue, collaboration and increased commerce—in essence driving the initiation, maintenance and growth of Sino-Israeli relations.

Dr. David Tooch

Dr. Tooch is a visiting professor at Pusan National University (South Korea), where he teaches international relations (IR). His research interests include technology in IR, diplomacy, security studies, and Israeli foreign relations. He obtained his PhD at Florida International University (FIU) and presents his work at annual meetings of the International Studies Association (ISA) and American Association of Geographers Annual (AAG). He earned an MA in geography at Georgia State University and a BA in TV/film and political science at Tel Aviv University. Before studying and teaching at FIU International University, he held various technical and editorial positions at media organizations like CNN International, Worldwide Television News (now known as Associated Press Television News) and NBC 6 Miami. His hobbies include jogging, bicycle riding, and photography of coastal environments.

Notes

1. Leong Chan and Tugrul U. Daim, "Technology Transfer in China: Literature Review and Policy Implications," *Journal of Science and Technology Policy in China* 2, no. 2 (26 July 2011), 122–41, https://doi.org/10.1108/17585521111155192.

2. Wei-Wei Zhang, "Opening to the Outside World" in *Transforming China* (London: Palgrave Macmillan, 2000), 20–26.

3. Gregory Veeck, "China's Agricultural Development: Challenges and Prospects (Review)," *China Review International* 14, no. 1 (2007): 84–87, https://doi.org/10.1353/cri.0.0029; and L. Jin and W. Young, "Water Use in Agriculture in China: Importance, Challenges, and Implications for Policy," *Water Policy* 3, no. 3 (2001): 215–28.

4. Veeck, "China's Agricultural Development," 84–87.

5. Li Luye, statement, in ""Report of the Committee on the Exercise of the Inalienable Rights of the Palestinian People," 29 November 1985, https://www.un.org/unispal/document/auto-insert-181651/.

6. Dan Levin, "Israel Increasingly Courting China as an Ally," *Sinosphere* (*New York Times*) (blog), 12 November 2013, https://sinosphere.blogs.nytimes.com/2013/11/12/israel-increasingly-courting-china-as-an-ally/.

7. June Dreyer-Teufel, "China's Vulnerability to Minority Separatism," *Asian Affairs: An American Review* 32, no. 2 (2005): 69–86, doi:10.3200/AAFS.32.2.69-86.

8. Degang Sun, "China and the Global Jihad Network," *Journal of the Middle East and Africa* 1, no. 2 (22 October 2010): 196–206, https://doi.org/10.1080/21520844.2010.517036.

9. Paul J. Smith, "China's Economic and Political Rise: Implications for Global Terrorism and U.S.–China Cooperation," *Studies in Conflict & Terrorism* 32, no. 7 (29 July 2009): 627–41, https://doi.org/10.1080/10576100902961847.

10. Liang Pingan, "Sino-Israeli Relations Interview," interview with author, Association for Israel Studies Annual Conference, Sde Boker, Israel, 2014.

11. Sun, "China and the Global Jihad Network," 196–206.

12. Produced by QSR International, NVivo is a qualitative data-analysis computer software package designed for researchers working with very rich text-based and/or multimedia information, where deep levels of analysis on small or large volumes of data are required.

13. Rowan Callick, "Israel Making Asian In-Roads," *Australian*, 27 February 2012, http://www.theaustralian.com.au/news/world/israel-making-asian-inroads/story-e6frg6so-1226281973135.