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Beijing's Oil Diplomacy

Amy Myers Jaffe and Steven W. Lewis

China's quiet shift to net oil importer status in 1993 marked a forced departure from the Communist Party's three-decade experiment in self-sufficiency and opened the possibility that China could, some day, be as vulnerable as other industrial nations to unexpected events affecting global oil markets. The impact on Chinese foreign policy formation is still playing itself out. But it is safe to say that concerns about oil security are increasingly influencing China's diplomatic and strategic calculus. A second-tier power whose foreign concerns (beyond nuclear issues) were mainly about defending its borders is becoming a global player with interests extending through Eurasia to the Middle East and to North and West Africa. The quest for oil has taken Beijing as far afield as Latin America. It is also affecting its attitudes towards US foreign policy.

Being a net oil-importer should, logically, bring China's interests closer to those of the oil-dependent West. In 1990, China abstained when the US mobilised an international coalition to drive Iraqi troops from Kuwait. A future crisis, after China has become a major importer, might elicit a more supportive stance.

But the change to Chinese interests and orientations also poses challenges for the West: in effect, the industrialised oil-consuming countries of the US, Europe and North-east Asia must convince an ambitious, energy-hungry China that secure supply for all requires a cooperative foreign policy. So far, unfortunately, China is taking a different tack. It is pursuing a decidedly bilateral approach to energy security, courting on its own behalf major oil producers such as Saudi Arabia, Iraq, Iran and the Sudan. The implications of such efforts are worrying. When oil markets are as tight as they have been in the past two years, bilateral deals can invite demands for political accommodations in exchange for stable supplies. At worst, this might mean increased demands on China for deliveries of weapons-of-mass-destruction (WMD)-related technology to these politically sensitive markets.

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China is not alone as a potential victim of an oil blackmail dilemma. The US, Europe and Japan have faced similar problems, especially in the 1970s, and have dealt with them to varying degrees of success over the years. Oil-producing countries have demanded arms shipments from the West, and some have been forthcoming. Still, Western consumer-nation alliances have deterred, to some extent, undue oil producer influence against individual nations. In particular, such multinational alliances have dented the cartel power of the Organization of Petroleum Exporting Countries (OPEC) on the world stage, reducing the chances of another 1973-style crisis. Western cooperation on energy security is backed up by the formal alliance of the International Energy Agency (IEA) which can counter oil-producer political blackmail by threatening a joint release of consumer country stocks to replace any oil withheld for political reasons by OPEC or another other major oil producer. This policy tool has helped keep Western foreign policy from becoming overly intertwined with its need for oil. The war on terror is just one example where such a separation can be important. If China refuses to join the oil-consuming club, the result could be costly. Bilateral Chinese oil diplomacy could lead to Chinese policy responses that thwart effective multinational initiatives in areas like conflict resolution or trade policy, or hinder Western efforts to prevent proliferation of sensitive military technologies and build-ups in conventional arms in strife-torn oil producing regions.

Beijing already has proof of the benefits of defying US sanctions policies. China's oil industry is reaping the spoils in Sudan, has planted its flag in Iraq and Iran, and is considering overtures to Libya. It is also courting other potentially unstable oil-producing countries in North and West Africa. Beijing's oil-diplomacy agenda also includes stronger ties with Saudi Arabia, potentially offering the Saudis an expanding alternative market to the US and Japan. As China develops these bilateral ties and its dependence on foreign oil grows, Beijing will become increasingly vulnerable to pressure from these energy producers, including those seeking sensitive military technology. At a minimum, some oil-producing governments will be shopping for light arms for regional conflicts or civil wars.

Political pressures will build for China to back positions popular with particular oil producers in forums such as the UN. This could pose new challenges for the West on a variety of issues, in much the way that Chinese and Russian political opposition to UN sanctions and military strikes against Iraq has thwarted effective policy against Baghdad in the past.

China has yet to consider seriously a multilateral alliance with other oil-consuming countries. The West could be held partially responsible, for not making a sufficiently convincing case for an alliance, or offering support in the energy field, such as finding a way to include China in the IEA stockpiling system and making significant efforts to transfer new, cleaner energy technologies to Chinese industry. For the US in particular, energy cooperation could be key in building a constructive relationship with China. It could smooth the way to an effective Sino-American weapons non-proliferation agenda and help impress upon China the importance of environmental issues.

China's Energy Dilemma

Throughout the 1970s and 1980s, China had the luxury of neutrality towards dramatic events in world oil markets. Oil prices inside China were fixed by the state central planners and had no relation to world prices. Internal supplies were fairly evenly matched with domestic requirements. With the Chinese economy sheltered from global oil-price volatility, the country's leaders could be indifferent to conflicts in the Middle East or other oil-producing regions. Although modest oil exports earned Beijing valuable foreign exchange for its economic and military modernisation programmes in the mid-1970s, energy-market disruptions neither hurt nor helped China substantially.

By contrast, the US economy, as a major consumer and importer of oil, was vulnerable to sudden swings in international oil markets. This vulnerability dictated foreign policies that promoted stable and reliable supplies. (Soviet interests were squarely in the opposite court: the Soviet economy relied heavily on oil and gas exports for hard currency, and benefited from rising oil prices.)

In recent years, in line with remarkable economic progress, China's oil demand has grown faster than its domestic oil production. In the last decade, oil consumption rose from 2.1 million barrels a day (b/d) in 1990 to 3.5m b/d in 1997 and is currently about 4.6m b/d.¹ China's now ranks third in the world for oil-products use, after the US and Japan.

Table One Estimates of Chinese Oil Demand

| (Millions of barrels per day) | 2000 | 2005 | 2010 | 2015 | 2020 |
|-------------------------------|------|------|------|------|------|
| Baker Institute | - | - | 6.2 | 7.4 | 8.8 |
| IEA | - | - | 7.1 | - | 10.1 |
| APERC | 4.3 | 5.5 | 6.8 | - | - |
| SDPC | 4.0 | - | 5.7 | 6.8 | - |
| PRC State Council | 4.0 | - | 5.2 | - | 6.4 |
| SETC | - | 4.9 | - | - | - |

Source Baker Institute figures from Kenneth B. Medlock III and Ronald Soligo, 'The Composition and Growth in Energy Demand in China', (Houston: Baker Institute, 1999), available at <http://www.bakerinstitute.org>; International Energy Agency (IEA) from IEA, *China's Worldwide Quest for Energy Security*, (Paris: OECD, 2000); Asia Pacific Economic Research Center (APERC) from APERC, 'APEC Energy Demand and Supply Outlook: Updated September 1998', (Tokyo: APERC, 1998); State Development Planning Commission (SDPC) from Shixian Gao, 'China', in Paul B. Stares (ed.), *Rethinking Energy Security in East Asia* (Tokyo: Japan Center for International Exchange, 2000), pp. 43–58; PRC State Council, *China Energy Strategy Study (2000–2050)*, Beijing, (in Chinese), cited in IEA (above), p. 47; State Economic and Trade Commission (SETC) from SETC, 'Tenth Five Year Plan for Developing the Petroleum Industry' (Beijing: SETC) available at <http://www.setc.gov.cn>.

This growth has transformed China into a major oil importer. In the first six months of 2001, crude oil imports stood at 1.29m b/d, down slightly from 1.41m b/d in 2000. Net refined product imports have averaged around 400,000 b/d in recent years, not including an additional 70,000 b/d to 100,000 b/d of smuggled gas oil, fuel oil and other oil-related products. These imports are expected to more than double over the next 15 years as China's domestic demand rises – particularly for the economically vibrant but energy-poor southern and eastern coastal provinces – and its domestic oil production fails to keep pace.² Depending on its rate of economic growth, China's oil use is projected to increase by between 750,000 b/d and 3m b/d, totalling between 5.4m b/d to 7.6m b/d by 2010. By 2020, if strong economic growth continues, China's oil demand could be as high as 7–12m b/d.³ Should China's oil production levels remain relatively stagnant, as has been the case for several years, China's oil import levels will grow to between 2–4m b/d over the next ten years. If oil use in the transportation sector rises from the current 60–90% of the total, as is more customary in industrialised nations, Chinese oil demand in 2010 could be even higher at between 6.3–8.1m b/d, and depending on GDP growth rates, between 11.4–17.9m b/d in 2020.⁴

Table Two Estimates of Chinese Oil Imports

| (Millions of barrels per day) | 2000 | 2005 | 2010 | 2015 | 2020 |
|-------------------------------|------|------|------|------|------|
| Baker Institute | - | - | 3.0 | - | 5.4 |
| IEA | - | - | 4.0 | - | 8.0 |
| APERC | 0.9 | 1.9 | 2.9 | - | - |
| SDPC | 0.7 | - | 1.9 | 2.7 | - |
| PRC State Council | 0.9 | - | 1.7 | - | 1.8 |
| PRC Industry | 0.7 | - | 1.3 | - | 2.6 |
| SETC | 1.2 | 1.7 | - | - | - |

Source Baker Institute figures from Soligo and Jaffe, 'China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives', working paper (Houston: Baker Institute for Public Policy, Rice University, April 1999), available online at <http://www.bakerinstitute.org>; IEA, *China's Worldwide Quest for Energy Security*, (Paris: OECD, 2000); APERC, 'APEC Energy Demand and Supply Outlook: Updated September 1998', (Tokyo: APERC, 1998); State Development Planning Commission (SDPC) from Shixian Gao, 'China', in Paul B. Stares (ed.), *Rethinking Energy Security in East Asia* (Tokyo: Japan Center for International Exchange, 2000), pp. 43–58; PRC State Council, *China Energy Strategy Study (2000–2050)*, Beijing, (in Chinese), cited in IEA (above); PRC Industry from *China Oil, Gas and Petrochemicals Newsletter*, vol. 7, no. 24, 15 December 1999, p. 1., cited in IEA, p. 47; SETC, 'Tenth Five Year Plan for Developing the Petroleum Industry' (Beijing: SETC) available at <http://www.setc.gov.cn>.

Table Two shows estimates, under varying growth scenarios, of China's future oil-import needs. Foreign experts generally predict that China will import 3–4m b/d in 2010 and 5–8m b/d in 2020. Although more recent public reports suggest a convergence towards foreign projections, in recent years Chinese government agencies and industry sources have predicted China will import 1.3–1.9m b/d in 2010, and around 2–3m b/d in 2020.

As seen in Table Three, China has met its rapidly growing oil import needs in recent years by shifting from Asian sources to a few Middle East countries – particularly Oman, Yemen and Iran – and, increasingly, to Africa, Russia and Central Asia.

Table Three Chinese Crude Oil Imports from Select Middle East Countries and Regions, 1992 – 1999 (Thousands of barrels per day)

| | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Oman | 61.2 | 81.6 | 67.2 | 73.0 | 113.0 | 180.6 | 115.8 | 100.4 |
| Yemen | 8.6 | 33.0 | 25.0 | 49.4 | 75.2 | 81.0 | 80.8 | 82.6 |
| Iran | 2.2 | 1.3 | 1.3 | 18.6 | 46.2 | 55.0 | 72.4 | 79.0 |
| UAE | 4.6 | 11.4 | 1.3 | 7.2 | N/A | 0.9 | 10.2 | NIL |
| Saudi Arabia | 3.6 | 4.2 | 2.8 | 6.6 | 4.6 | 9.8 | 36.0 | 49.8 |
| Mid-East Total | 80.6 | 131.8 | 98.0 | 155.2 | 239.2 | 335.6 | 333.2 | 348.2 |
| Mid-East (%) | 36% | 42% | 40% | 45% | 53% | 47% | 61% | 48% |
| Africa Total | 10.0 | 42.6 | 10.0 | 36.8 | 38.6 | 118.2 | 43.8 | 134.8 |
| Africa % | 4% | 14% | 4% | 11% | 9% | 17% | 8% | 18% |
| Asia-Pacific Total | 134.2 | 130.6 | 136.8 | 141.6 | 164.4 | 188.2 | 109.4 | 136.4 |
| Asia-Pacific % | 59% | 42% | 55% | 41% | 36% | 27% | 20% | 19% |
| Other | 2.2 | 8.2 | 1.8 | 8.0 | 10.2 | 67.4 | 60.0 | 112.8 |
| Other % | 1% | 3% | 1% | 2% | 2% | 10% | 11% | 15% |
| Total | 227.2 | 313.4 | 247.0 | 341.8 | 452.4 | 709.4 | 546.4 | 732.2 |

Source Derived from Chinese customs data used in Xiaojie Xu, 'China and the Middle East: Cross Investment in the Energy Sector', *Middle East Policy*, vol. vii, no. 3, June 2000, and converted at 7.3 barrels per tonnes.

Domestic production

Domestic onshore production is dominated by two enormous, semi-privatised integrated national oil and gas companies, China National Petroleum Corporation (CNPC) and Sinopec. Western oil companies' onshore activities in China have been limited mainly to smaller oilfields and to wildcat exploration.

Among the companies with oil-field investment in China are Exxon, Texaco, Agip, BP, Shell, and a number of Indonesian and Japanese companies. China has placed some hopes on developing the western oilfields of the Tarim Basin, but low oil prices and an uncertain environment for foreign investors have slowed development of the region. PetroChina, the international subsidiary of CNPC, offered a licensing round for 15 oil and gas blocks areas in north-east China's Bohai Bay Basin in September 2000, but so far no commercial contracts have been signed. PetroChina has also had plans to offer new blocks in the Erdos Basin in north-west China in late 2001.

Offshore oil production represents an expanding domain, reaching 410,000 b/d in mid-2001, up from 300,000 b/d in the late 1990s. A semi-privatised oil and gas exploration and production company, China National Offshore Oil Corporation (CNOOC) enjoys almost-exclusive rights to develop offshore fields.⁵ Foreign explorers have been adding substantially to China's offshore discoveries in the last three years, finding more than one billion barrels of oil in China's eastern Bohai Bay⁶, the Pearl River Delta in south China and the Beibu Gulf. In the South China Sea, exploration disappointments in the 1980s and 1990s are giving way to new discoveries. Phillip's fields in Xiajiang recently peaked at 100,000 b/d, but are declining to around 80,000 b/d. BP's Liuhua field is running at around 26,000 b/d while Statoil's Lufeng field is averaging 12,000 b/d. Meanwhile, the CACT consortium, comprising Italy's Eni, Chevron, Texaco and CNOOC, has also announced a new oil find in the South China Sea.⁷ Six fields there produce around 140,000 b/d and four more fields are under development. About a third of the offshore production is sold abroad, mainly to refiners in Singapore, with the rest sent to China's southern provinces.

Despite these finds, China's domestic oil production is not expected to increase substantially in the coming years. Low oil prices, ineffective price reform, massive flooding at the Daqing oil field and inadequate domestic oil-transportation infrastructure combined to produce a small drop in Chinese oil output in 1998 to 3.2m b/d, down from 3.3m b/d in 1997. Since then, rising oil prices have encouraged a slight recovery. Output this year has been hovering between 3.21–3.31 m b/d.⁸

While some analysts continue to predict that Chinese oil production could rebound over the next ten years, there are many factors that might work against this, including: capital shortages within China's major industries; fiscal constraints facing the central government; the challenge for local governments and state corporations to dedicate scarce funds to paying the costs of layoffs and privatisation of social services; a lack of interest among foreign investors in acreage offered for exploration and the prospects that oil prices could remain low over the longer term.⁹ For these and other reasons, domestic output is generally expected to remain relatively flat for the coming decade. As seen in Table Four, forecasts for 2010 among respected sources generally range from 3.0m b/d to 3.9m b/d.

Table Four Estimates of Chinese Domestic Oil Production

| (Millions of barrels per day) | 2000 | 2005 | 2010 | 2015 | 2020 |
|-------------------------------|------|------|------|------|------|
| Baker Institute | - | - | 3.3 | - | 3.5 |
| IEA | - | - | 3.1 | - | 2.1 |
| US DOE | - | 3.1 | 3.1 | 3.0 | 3.0 |
| APERC | 3.4 | 3.6 | 3.9 | - | - |
| SDPC | 3.2 | - | 3.8 | 4.1 | - |
| PRC State Council | 3.1 | - | 3.3 | - | 3.6 |
| SETC | 3.2 | 3.4 | - | - | - |
| Wood Mackensie | - | - | 3.0 | - | - |
| East-West Center | 3.3 | 3.5 | 3.7 | - | - |

Source Baker Institute figures from Soligo and Jaffe, 'China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives', working paper (Houston: Baker Institute for Public Policy, Rice University, April 1999), available online at <http://www.bakerinstitute.org>; IEA, *China's Worldwide Quest for Energy Security*, (Paris: OECD, 2000); US DOE from United States Department of Energy, 'International Energy Outlook 2001', 28 March 2001, available at http://www.eia.doe.gov/oiaf/ieo/tbld1_d5.html; APERC, 'APEC Energy Demand and Supply Outlook: Updated September 1998', (Tokyo: APERC, 1998); SDPC from Shixian Gao, 'China', in Paul B. Stares (ed.), *Rethinking Energy Security in East Asia* (Tokyo: Japan Center for International Exchange, 2000); PRC State Council, *China Energy Strategy Study (2000–2050)*, Beijing, (in Chinese), cited in IEA (above); SETC, 'Tenth Five Year Plan for Developing the Petroleum Industry' (Beijing: SETC) available at <http://www.setc.gov.cn>; WoodMackensie Consultants, *Asia Pacific Report*, (Houston: WoodMackensie, 1998); East-West Center from Fesharaki, 'China's Downstream Industry to 2010: Multi-Client Study', (Honolulu: Fesharaki Associates Consulting, 1997).

China's Energy Strategy 1996–2000

Recognising the limits to domestic oil resources and the economic and environmental costs of relying heavily on coal, China's leadership has been developing diversification strategies to enhance its future energy security.

The Natural Gas Alternative

One major initiative has focused on the expansion of natural gas resources inside the country, targeting increases for natural gas utilisation from 3% currently to 8–10% by 2015. China has ample gas resources in the Erdos, Sichuan, Tarim Basin, Junggar and Qaidam areas as well as in the western South China Sea. The central government recently brokered a deal between Sinopec and CNOOC to jointly develop the Chunxiao gas field in the Xihu Basin, offshore from Shanghai.

More ambitiously, Beijing has plans to build a 4,000-kilometre pipeline linking the north-western territory of Xinjiang's Tarim Basin gas reserves with Shanghai.¹⁰ ExxonMobil, together with CLP of Hong Kong; Royal Dutch Shell with Hong Kong Oil and Gas; and Russia's Gazprom and Stroitrangas are among the bidders for the \$4.8bn Tarim to Shanghai 'East-West' gas pipeline that is projected to carry as much as 34–54m cubic metres of gas per day.¹¹

Although central government and CNPC officials speak of the development of the East-West gas pipeline as a done deal, there are considerable obstacles to its development. The pipeline is listed as a key project in the Tenth Five-Year Plan, 2001–2005, yet it is clear that the central government is leaving the funding of the project up to state corporations, local governments and foreign partners. Without a transparent and effective legal system to resolve potential disputes arising from the construction and operation of China's first trans-regional energy infrastructure project, however, potential investors, both domestic and foreign, are justified in seeing the pipeline as a very expensive policy experiment. The government's commitment to similarly large projects – the Three Gorges Dam and its Central China power grid – has traditionally been reflected in the establishment of a high-level Communist Party working group to coordinate central and local government and state enterprises. The East-West gas pipeline as yet has no such Central Party working group to support it, an omission that might impede its progress.

Internationalising the Chinese oil industry

Another of Beijing's strategies to reduce China's oil-supply insecurity is a move to internationalise the Chinese oil industry. Starting in 1996, the government unveiled a plan to attain around a third of its energy needs through international exploration and acquisition activities.¹² Although oil import levels were still low at that time, a sudden surplus of cash within the CNPC budget in 1996 created an impetus to invest promptly – lest the funds be diverted elsewhere. In line with a new government directive to acquire productive acreage abroad, in 1996–1997 CNPC quickly initiated investments in international oil fields in such locations as the Sudan, Venezuela, Kazakhstan, and Peru, four places that were offering areas for oil exploration and where CNPC stood a good chance of winning acreage quickly. CNOOC has used the same strategy in early 2002, buying the Widuri and Cinta fields in Indonesia from Repsol-YPF for \$585m and thereby adding 100,000 b/d of light crude oil that can quickly be processed through China's existing refinery capacity.¹³

Oilfield exploration and investment in the Middle East

China also investigated the possibility of oil-exploration deals and oil-field investment activities in the Middle East, including Iraq and Iran.¹⁴ CNPC and the Chinese state-owned weapons and industrial conglomerate Northern Industries Corporation signed, in June 1997, a 'post-sanctions' memorandum of intent for development of the al-Ahdab field in central Iraq. The development would only begin once the UN sanctions against Iraq were lifted. The field

Table Five Chinese Overseas Oil Project Investment in Late 1990s

| Country and Project | | Year | Contracted Investments (\$US million) | |
|---------------------|----------------|------|--|----------------------|
| | | | Total Value | Foreign Contribution |
| Sudan | Blocks 1, 2, 4 | 1996 | 187.37 | 105.38 |
| | Block 6 | 1997 | 3.02 | - |
| | Refinery | 1997 | 56.20 | 28.11 |
| Kazakhstan | Arkbinsk | 1997 | 91.33 | - |
| | Uzen | 1997 | 64.08 | 44.16 |
| Venezuela | | 1997 | 82.59 | - |
| Peru | Blocks 6, 7 | 1997 | 6.14 | - |
| Iran | al-Ahdab | 1997 | 64.83 | - |
| Nigeria | | 1997 | 26.09 | 13.04 |
| Canada | JV | 1997 | 1.80 | - |
| Total | | | 583.63 | |

Source Xiaojie Xu, 'China and the Middle East: Cross Investment in the Energy Sector', *Middle East Policy*, vol. vii, no. 3, June 2000.

contains an estimated 360m barrels of oil and would require an investment of around \$1.3bn. However, because of the United Nations sanctions, Chinese oil company activity has reportedly been limited mainly to surveying work on al-Ahdab. In 1998, CNPC began negotiations for a second field, the Halfayah field, but no contract has been reported as signed. CNPC has also investigated the possibility of service agreements with Iran but no final transactions have been reported.¹⁵

China has pursued 'cross investment' arrangements with Saudi Arabia.¹⁶ Under such a strategy, China would allow Saudi Arabian companies to make downstream refinery investments in China and Chinese oil companies would pursue upstream oil-field activities in the Kingdom. Both Riyadh and Beijing see the benefit to such links: China offers a potentially growing market for Saudi crude while Saudi Arabia, as the single largest supplier to world oil markets, is important for the security of Chinese energy supply.

The groundwork for Sino-Saudi cooperation was laid in an agreement signed in September 1999 when Chinese President Jiang Zemin visited Saudi Arabia. Under the agreement, China promised to open its downstream refining business to the Saudis. The agreement stipulated, however, that Saudi Arabia would open its domestic market to Chinese investment *except* in oil exploration and development.¹⁷ China, strapped for cash, is interested in Saudi financing for

investment projects that would allow Chinese refineries to handle a larger amount of Saudi crude. However, foreign entry into the Chinese downstream industry has proved very difficult, and few ventures have proceeded smoothly.¹⁸ Overall, China's not-very-welcoming investment climate in the refining sector will likely inhibit wide-scale construction of new facilities to meet rising internal demand.

There has been a political side to China's Middle East deal-making. Chinese foreign-policy analysts have produced a stream of articles about the importance of forging a strategy for the region.¹⁹ Some argue that the West's strong position in the Middle East could threaten China's access to supplies.²⁰ To reduce the threat, China has used military sales to forge closer links while at the same time offsetting any balance of payments deficit created by large oil purchases.²¹ China's oil imports from Iran have risen to 60,000 b/d in 2000, up from 20,000 b/d in 1994. At the same time, China has been a steady supplier of military equipment to Iran. Chinese sales of missiles and advanced technology to Iran totalled \$900m from 1993–1996 and \$400m from 1997–2000, the later drop reflecting from US pressure on the issue.²²

As part of its broader Middle East strategy, China has been supporting Iraq in the United Nations. Throughout the 1990s, China joined ranks with France and Russia to call for the early lifting of United Nations sanctions against Iraq and has opposed military strikes against Baghdad.²³ Saudi Arabia severed diplomatic links with Taiwan in 1990 when it established relations with Beijing.²⁴ Finally China is likely to face pressure to accept some sort of linkage between oil supply from the Middle East and provision of military assistance. Beijing is considered a prime alternative for countries seeking ballistic-weapons technology that the US is unwilling to provide. The Saudis, should the 11 September terrorist attacks eventually bring a deterioration in US military support, look to China as a possible source for diversifying its arms procurement.²⁵

But there are barriers to Chinese efforts to build ties to the Persian Gulf. International sanctions against Iraq have prevented China from moving forward there, while complicated geology and difficult commercial conditions have thwarted investment plans in Iran. Moreover, Saudi Arabia – where privatising oil fields is considered a political taboo – has so far only indicated a willingness to consider foreign investment in integrated domestic natural-gas projects. CNPC says it has no strong interest in this kind of costly investment, which would not provide a shareholding in oil supplies to bring back to China. Chinese sources express pessimism about the possibilities for the oil exploration and production arrangements that they really want.²⁶

Technical problems pose further barriers to closer oil-industry ties between China and the Middle East. China's aged and unsophisticated oil-refining facilities are equipped to handle large quantities of domestic high-quality waxy crude oil, not low-quality heavy oil exported from Iraq, Iran, Saudi Arabia and Kuwait. For China to benefit from large Middle Eastern supply deals would require massive multi-billion dollar investments in its refining sector. The

investments planned so far for the next five years are likely to leave China able to process little more than 1m b/d of this lower quality Persian Gulf oil, though it will be able to import the higher quality crude oil from Abu Dhabi, Yemen or Oman.²⁷

Finally, rising oil imports from the Persian Gulf would create new strategic vulnerabilities. China's military and particularly naval buildup, though sizeable, is far from sufficient to guarantee East Asian sea-lanes, much less protect access to Persian Gulf oil.²⁸ Thus, for the foreseeable future, ironically, China will be forced to rely on the US military to protect its access to this oil, greatly constraining its geo-strategic options.

Eurasian sources of oil

The insecurity of Middle East supply, China's discomfort with US domination of important sea lanes and other accompanying problems have led the Chinese to consider inland alternatives. One option is to put greater emphasis of supplies from countries that border China – notably Russia and Kazakhstan. Such initiatives would reduce China's vulnerability to American dominance of the sea lanes and its stronger Middle East connections.²⁹

In July 2001, Chinese leader Jiang Zemin visited Russia and signed several important energy-trade agreements. One agreement calls for the feasibility study of a 400,000 b/d oil pipeline from east Siberia to eastern China. This project would link the Chinese market to the 11bn barrel reserves of the Yurubcheno-Takhomskaya zone currently controlled by the Russian oil companies Yukos and Salvneft. China and Russia are also discussing with Russia a major natural gas link between Irkutsk and Yakutia and Chinese markets. A BP-led group is trying to develop the 1.5 trillion cubic metre Kovykta east Siberian gas field for export to China.³⁰

China has also looked at increasing oil imports from Kazakhstan via an overland route which would avoid any security risks associated with long supply lines by tanker from the Persian Gulf. China is said to view its activities in Central Asia as a potential land bridge to the Persian Gulf.³¹ However, the costs of pipeline transportation around Eurasia could exceed that of maritime shipments, forcing Beijing to consider how large a premium it is willing to pay for diversification of supply.³² For the time being, the State Council seems disinclined to commit to such premium costs and pressured CNPC in August 1999 to shelve the pipeline construction plans at least for the foreseeable future.³³ Oil produced in CNPC's Kazakh fields is likely to be refined by regional refiners such as Iran who will give CNPC crude oil in exchange at the Persian Gulf or another port with ocean access.³⁴

China's first investment in Kazakhstan came in June 1997, with the China National Petroleum Corporation's (CNPC) agreement to purchase 60% of Kazakhstan's Aktyubinsk Oil Company for \$4.3bn. CNPC also announced plans to build a \$3.5bn, 3,000km pipeline linking western Kazakhstan with its own Xinjiang region.³⁵ China said it hoped to secure significant, long-term supplies of crude oil which would not only make a proposed Kazakh–Xinjiang

pipeline more economically feasible, but also render economically attractive planned eastbound pipelines which would link Xinjiang with China's industrial heartlands.³⁶ However, for reasons equally applicable to the development of the East–West gas pipeline mentioned above, the actual construction of the pipeline is likely to be problematic, with economic uncertainties compounded by political risk.

China is faced with the same endemic problems that have delayed pipeline construction by Western consortiums in Central Asia. Ethnic unrest and regional instability has made it difficult to find investors willing to commit to building the infrastructure essential for transporting the energy resources to market.³⁷ In the case of an export route to China, this threat includes not only instability in Central Asian countries but also possible troubles in Xinjiang itself from Uighur separatists, who have already mounted attacks on oil installations and convoys.³⁸ Nearly half of the region's 16m people regard themselves as Uighur.³⁹ China's Central Asian strategy calls for integrating the Xinjiang region into an emerging Central Asian market – cross-border trade reached \$950m in 1998 – while opposing autonomy movements, secular or Islamic.⁴⁰

Beijing has been fighting ethnic separatism and Islamic nationalism for several decades.⁴¹ This activity has put it in a difficult position in forging ties with the Middle East, especially Saudi Arabia, which actively supports Islamic movements abroad. The Saudi religious establishment has expressed a special interest in the welfare of Chinese Muslims, and this has created internal pressure on the Saudi government to support the Chinese Muslim populations financially and diplomatically. The late Sheikh Abdulaziz bin Baz, former Grand Mufti of Saudi Arabia, for example, proclaimed in 1998: 'We have a moral obligation to help our Chinese Muslim brothers'.⁴²

Saudi Arabia has extended aid for the construction of mosques in China but has been cautious in its support for the Xinjiang Muslims, out of concern for its improving relations with Beijing. Mamoun Kurdi, former Saudi Deputy Foreign Minister for Economic and Cultural Affairs, noted, 'we have been very careful on how we deal with the Uighurs. For while we have a responsibility as the leading and most influential Muslim nation, we also do not want to upset the Chinese'.⁴³ Indeed, China has kept careful watch over Islamic movements inside its borders. Mr Zhou Guohai, Chinese Minister of Religious Affairs, proclaimed that 'after the incidents in the US [on 11 September], we will make sure that Islam is practiced in a way that is in line with Chinese culture and tradition'.⁴⁴

China's energy strategy: new formulations

Chinese oil-industry sources complain that CNPC's legal and financial inexperience makes it difficult to compete with the major international oil companies to gain oil-exploration rights in promising areas. Foreign-policy analyst Yishan Xia puts it in rather traditional terms:

Western monopoly capital, with the support and assistance of their governments, has scrambled and seized the main oil and gas resource markets in all parts of the world. Almost all good resources markets in the world have been occupied and possessed by

them. There is intense competition among different groups of Western monopoly capital. All of them will certainly try even harder to impede Chinese companies from obtaining these oil resources.⁴⁵

The answer, according to Chinese strategists, is to focus China's international exploration drive on countries where Western, predominantly US, firms cannot so easily get in the way. Countries under US unilateral oil sanctions are therefore prime Chinese investment targets. CNPC officials say while the initial focus centred on purchases and cooperative ventures in some 16 countries, most notably Kazakhstan and Russia, new initiatives are being considered in Sudan, Libya and West Africa.⁴⁶ As well as avoiding US competition, this shift in focus also aims at acquiring resources of suitable quality for refining in China's own facilities, without the need for expensive refinery investments.

In 1997, CNPC signed an exploration and production agreement with the Sudanese government for blocks in the Muglad Oilfield, and in July 1999 announced that daily production of the field was 150,000–200,000 b/d. It also completed a 1,540km, 300,000 b/d pipeline from Heglid to the Port of Sudan, where it had constructed an oil refinery with processing capacity of 50,000 b/d.⁴⁷ Through its subsidiaries, CNPC has the personnel and infrastructure to support exploration and development in the Sudan, and plans to expand activities elsewhere in Africa, including Nigeria and Chad, and possibly Niger and Equatorial Guinea.⁴⁸ CNPC is also looking at acreage in Algeria, Tunisia and Libya.⁴⁹

As in other regions, China's activities in Africa have geopolitical as well as commercial implications. Still hoping for a leadership role in the developing world, China also seeks to garner African support for its position on the status of Taiwan.⁵⁰ Chinese trade and military delegations to Africa are often able to elicit 'one-China' statements from their hosts.⁵¹ In recent years, Beijing has won diplomatic recognition from Ethiopia, Niger and South Africa. Yet, from China's perspective there is much work still to do: Burkina Faso, Chad, Gambia, Liberia, Malawi, Senegal and Swaziland are among the 26 countries that still recognize Taipei.⁵² Most importantly, China must continue to woo developing countries with economic projects or military sales, or risk having its gains lost by the lure of aid from Taipei. Senegal received foreign aid from Beijing in 1971 in return for diplomatic recognition, but 'swapped' recognition in 1996 following new aid and ties from Taiwan.

China has begun expanding arms trade and cooperation in Africa in many of the same countries where it is pursuing oil-sales and exploration-investment relationships. Representatives from China's Defence Ministry and senior members of the People's Liberation Army travelled extensively in Africa in 2000 and 2001, with major tours in Angola, Cameroon, Cote d'Ivoire, the Congo, Gabon, Ghana, Ethiopia, Namibia, Niger, Nigeria, Sudan and Zimbabwe. Delegations from some of those nations were also received in Beijing.

West Africa and Libya will be increasingly important suppliers to global oil markets. Production could rise to 7–11m b/d by 2010, up from around 5m b/d currently, offsetting declining oil production from the UK North Sea oilfields.

However, Africa's many problems will also impinge on its oil production. Instability and conflict has already held back oil development and exports from Sudan, Angola, Chad and Nigeria. Chinese arms sales in the region could aggravate these problems.

To be sure, Chinese arms exports are generally much lower than those of the West and Russia, and its military sales, which have been falling, focus on small, conventional-arms transfers to developing nations. China sold on average some \$970m annually between 1993 and 2000. Still, because it is capable of providing high-technological aid for the development of weapons of mass destruction (and has been accused of doing so for Pakistan, Iran and North Korea), its arms exports are of great concern.⁵³ Expansion of the PLA's sights to not only the Middle East but also North and West Africa is bound to create worries that Beijing will export sensitive military equipment to these new markets.

Implications for the West

If Beijing's energy diplomacy with key oil-producing states is accompanied by increased arms sales, the consequent instability could threaten the security of China's own oil supplies. In any event, the transfer of sensitive technology to some of these countries would continue to cast a very dark shadow over Sino-American relations.

China should understand that there is an alternative strategy for energy security. The OECD states have long experience in the use of international institutions and multilateral approaches to mitigate vulnerability to oil-supply disruptions. They have worked together to avoid bilateral trade-offs between energy supply and unrelated political issues. It will be in the Western interest to entice China to band together with other large oil-consuming nations to guard against the eventuality of an oil disruption or cope with one that has already created a supply emergency. Beijing should be encouraged to build a strategic oil reserve to reduce its vulnerability to an international supply disruption. The use of this reserve, in coordination with International Energy Agency (IEA) countries, could reduce the chance of deleterious competition in tight oil markets and of any oil producer, or group of oil producers, organising an oil-supply cut-off for political purposes. WTO rule-making in the energy-trade area is another instrument that can be used to discourage bilateral agreements on non-competitive terms.

A Chinese strategic petroleum reserve would also aid all consuming countries by eliminating a major importer's free-riding off other countries' stock releases. If major Asian consumers like China and India agree to build stocks and to develop joint emergency management with the IEA, this would expand the volume of stocks available during a supply cut-off without the IEA footing the entire bill. It would also make distribution of oil during a supply emergency more efficient and globally dispersed, thereby lessening the effects of any dislocation and the related immediate jump in world oil prices.

Other cooperative energy initiatives should also be explored. Research and development of alternative fuels and technologies to lessen China's rising need for imported oil have an important role to play (and would yield fruitful environmental gains as well). Japan is already working jointly with China on clean-coal research and development. Initiatives to help China leapfrog existing gasoline car technology in favour of propane, natural gas, or more efficient hybrid and fuel-cell vehicles would also greatly reduce the rise in China's need for oil while at the same time reducing its carbon and other emissions.

Finally, despite political obstacles, the North and South American experience of international natural gas and shared electricity grids has been largely positive, yielding improved access to supplies and lowered costs. Several such grids have been proposed in Asia, including gas grids linking Association of South East Asian Nations (ASEAN) countries. Development of resources in Russia's Far East could be key to a similar grid in North-east Asia.

Policy analysts in Beijing, like their Western counterparts, have tended to tackle the difficult subject of oil geopolitics by emphasising the need to gain an edge in the competition for scarce resources. But energy markets could just as easily be oversupplied as undersupplied in the coming decades, depending on how effectively key consuming nations join forces in a cooperative framework. Such cooperation could offer at least partial protection against the more unsettling scenarios arising from China's burgeoning demand for oil. The West should take the lead in utilising technology and political cooperation to ensure that secure, ample, cleaner energy supply is available at reasonable prices to fuel prosperity in the world economy.

Notes

- ¹ 'Asian Demand Flat, and May Get Worse', *Petroleum Intelligence Weekly*, 30 July 2001, p. 2.
- ² National estimates provided by Asia Pacific Consulting; for estimates up to 2010 of national product use and use in four southern provinces see Sinopec, *Zhongguo shiyou shichang xianzhuang ji xiangguan zhengce (The Current Situation in China's Oil Market and Related Policies)* (Beijing: Sinopec Information Center, 1999); for a thorough exploration of the oil, gas and oil products market in China in 2000 see China National Petroleum Corporation (CNPC), *2000 nian zhongguo shiyou shichang fenxi baogao (In-Depth Analysis of China's Oil Market in 2000)* (Beijing: CNPC Information Research Center, 2001).
- ³ Ronald Soligo and Amy Jaffe, 'China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives', working paper (Houston: Baker Institute for Public Policy, Rice University, April 1999), available online at <http://www.bakerinstitute.org/>
- ⁴ *Ibid.*
- ⁵ Following a 1998 restructuring, CNPC, previously largely an upstream oil and gas enterprise, and Sinopec, previously a refining and distribution enterprise, swapped upstream and downstream assets such that CNPC enjoys almost-exclusive exploration and production rights in the north-east, north and north-west, and Sinopec enjoys almost-exclusive distribution rights in the central, south and south-east. Through subsidiary enterprises such as Sinopec's China Star Petroleum Exploration Corporation, and various oilfield administrations and refineries, CNPC, Sinopec and CNOOC have footholds in the 'exclusive rights' territories of each other. Since 1998 all three have undergone semi-privatisation through the establishment of subsidiaries selling shares in Hong Kong, New York and Shanghai capital markets (CNPC's subsidiary is PetroChina). For a discussion of the restructuring see Steven W. Lewis, 'Privatizing China's State-Owned Oil Companies', working paper (Houston: Baker Institute for Public Policy, Rice University, April 1999), available online at <http://www.bakerinstitute.org>
- ⁶ A joint venture between Phillips Petroleum and CNOOC is developing the Penglai 19-3 oil field. The reserve potential of the field is estimated to be the equivalent of 500–800m barrels of oil. Production should total 35,000 b/d to 40,000 b/d by August 2002, rising to 65,000 b/d by 2005. CNOOC has said it plans to raise Bohai Sea crude output to 360,000 b/d by 2005. CNOOC is also planning to raise production at its wholly owned Suizhong 36-1 field, off China's north-east coast, to 69,000 b/d in the coming year. The field has only minimal production to date. Apache's Zhao Dong field will produce 25,000 b/d by the end of 2003. Kerr McGee and CNOOC also have a new discovery at Caofeidian.
- ⁷ *Petroleum Argus Newsletter*, 18 June 2001, p. 10.
- ⁸ Energy Intelligence Group database, subscription service, www.energyintel.com
- ⁹ CNPC, Sinopec and CNOOC employ more than 2m employees, the majority of whom will lose their jobs under current downsizing plans. Restructuring, particularly further privatisation, is likely to proceed very slowly, however, because local governments and employees have a strong interest to work together in opposing central government and

corporate headquarter plans made in Beijing: China has no national unemployment assistance, health-care or pension system, and so the cost of establishing a social welfare plan for energy sector employees must be borne by local governments.

- ¹⁰ The project would enhance gas movements that got a boost in 1997 with the completion of an 864km line from Erdos to Beijing, which currently carries 1bn cubic metres (bcm) of natural gas to the capital. The throughput of this latter pipeline is slated to increase to 3 bcm.
- ¹¹ BP recently announced it was pulling out of bidding for the project, which will require billions of dollars in infrastructure investments to facilitate use of the gas in Shanghai. BP is already committed to building an LNG import terminal in southern China.
- ¹² 'China's CNPC Leaps on to Global Oil Production Stage', *Petroleum Intelligence Weekly*, 9 June 1997, p. 3.
- ¹³ Erica Strecker Downs, 'China's Quest for Energy Security', (Santa Monica, CA: RAND, 2000), p. 14; 'Chinese Energy Majors in Long March Upstream', *Petroleum Intelligence Weekly*, 28 January 2002, p. 3
- ¹⁴ For a thorough description of China's cross-investment strategy in the Middle East see Xu, 'China and the Middle East: Cross Investment in the Energy Sector', *Middle East Policy*, vol. vii, no. 3, June 2000.
- ¹⁵ *Ibid.*
- ¹⁶ *Ibid.*
- ¹⁷ In late 2001, Saudi Aramco, the Saudi state oil company, ExxonMobil and Fujian Petrochemical Company signed an agreement for a joint feasibility study for a 250,000 b/d upgrading of the Fujian refinery. Saudi Arabia has also proposed to construct a 100,000 b/d refinery in Shandong province and is negotiating with Sinopec to expand the refinery at Maoming.
- ¹⁸ Total SA of France holds a 20% stake in West Pacific Petrochemical Company (WEPEC) for an investment in the refinery at Dalian. Exxon, ARCO and Caltex have also pursued downstream ventures in China. BP currently owns over 20% in the Zhenhai refinery.
- ¹⁹ See Xiaojie Xu, 'China and the Middle East: Cross Investment in the Energy Sector'; also Qiang Wu and Xuemei Xian, 'China's Energy Cooperation with the Middle East', *Strategy and Management*, no. 2, 1999, p. 51 (in Chinese), and others cited in Downs, 'China's Quest for Energy Security'.
- ²⁰ Wu and Xian, 'China's Energy Cooperation with the Middle East'.
- ²¹ John Calabrese, 'China and the Persian Gulf: Energy and Security', *Middle East Journal*, vol. 52, no. 3, Summer 1998, pp. 351–366; and Sergei Trough, 'China's Changing Oil Strategy and Its Foreign Policy Implications', working paper (Washington DC: Center for Northeast Asian Policy Studies, Brookings Institution, Fall 1999) available at <http://www.brook.edu/neasia/papers/1999%5Ftrough.htm>
- ²² See data and discussion in Richard F. Grimmett, 'Conventional Arms Transfers to Developing Nations, 1993 to 2000', (Washington DC: Congressional Research Service, 16 August 2001), p. 58, available on the website of the Federation of American Scientists at <http://www.fas.org/asmp/resources/govern/crs2000.pdf>.
- ²³ Calabrese, 'China and the Persian Gulf: Energy and Security'.
- ²⁴ *Ibid.*
- ²⁵ Interviews with Saudi oil industry analysts in December 2001.
- ²⁶ Interviews with CNPC officials in 2001.

- ²⁷ See table provided by Asia Pacific Consulting in Soligo and Jaffe, 'China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives'.
- ²⁸ Evan Feigenbaum, 'China's Military Posture and the New Economic Geopolitics', *Survival*, vol. 41, no. 2, Summer 1999, pp. 71–88.
- ²⁹ James Hsiung, 'China's Omni-Directional Diplomacy', *Asian Survey*, vol. 35, no. 6, June 1995, pp. 573–586.
- ³⁰ 'Russia to China Race', *World Gas Intelligence*, 22 August 2001, vol. XII no. 24, p. 1; and 'Russia Reaches for Chinese Oil and Gas Outlets', *Petroleum Intelligence Weekly*, 23 July 2001, p. 4.
- ³¹ Xiaojie Xu, 'The Oil and Gas Links between Central Asia and China: A Geopolitical Perspective', *OPEC Review*, March 1999.
- ³² For more detailed analysis of the costs involved, see Soligo and Jaffe, 'China's Growing Energy Dependence: The Costs and Policy Implications of Supply Alternatives'.
- ³³ 'CNPC Shelves China-Kazakhstan Oil Pipeline', *Oil and Gas Journal*, 30 August 1999, p. 44; and Quan Lan, 'Transnational oil pipeline shelved', *China Oil, Gas and Petrochemicals*, vol. 7, no. 16, 15 August 1999, p. 2.
- ³⁴ Downs, 'China's Quest for Energy Security', p. 28.
- ³⁵ Tony Walker and Robert Corzine, 'China Buys \$4.3bn Kazak Oil Stake', *Financial Times*, 5 June 1997, p.9.
- ³⁶ Amy Myers Jaffe and Martha Brill Olcott, 'The Geopolitics of Caspian Energy', in Yelena Kalyuzhnova and Dov Lynch (eds), *The Euro-Asian World: A period of Transition*, (London: Macmillan Press, 2000).
- ³⁷ Rajan Menon, 'Traacherous Terrain: The Political and Security Dimensions of Energy Development in the Caspian Sea Zone', *Analysis, the National Bureau of Asian Research*, vol. 9, no. 1, 1998, p. 10.
- ³⁸ 'Central Asia: China's Strike', *The Economist*, 16 August 1997, p.32.
- ³⁹ Justin Jon Rudelson, *Oasis Identities: Uighur Nationalism Along China's Silk Road* (New York: Columbia University Press, 1998).
- ⁴⁰ Dru Gladney, 'China's Interest in Central Asia', in Robert Ebel and Rajan Menon (eds), *Energy and Conflict in Central Asia and the Caucasus* (Oxford, UK: Roman & Littlefield Publishers, 2000).
- ⁴¹ Systematic information is unavailable, but see recent reports by observers, such as Norman Webster, 'Simmering Discontent: Beijing Continues to Repress any Sign of Islamic Nationalism in Its West', *The Gazette* (Montreal), p. B7, 13 October 2001, and Vivien Pik-Kwan Chan, 'Mosque Leaders' 'Re-Education' Campaign Stepped Up', *South China Morning Post, Business Post* supplement, 14 November 2001.
- ⁴² Reported from a sermon in Riyadh in September 1998, as published in 'The Sino-Saudi Energy Rapprochement: Implications for US National Security', Nawaf Obaid, Amy Jaffe, Edward Morse, Chad Garcia and Kirk Bromley, US Department of Defense, Office of Net Assessment, Office of the Secretary of Defense, forthcoming, February 2002.
- ⁴³ Interview, Riyadh, 15 July 1998, *ibid*.
- ⁴⁴ Interview in Beijing with the BBC World Service, aired 29 December 2001.
- ⁴⁵ Yishan Xia, 'Woguo nengyuan xingshi ji zhanlue zhi wo jian' ('My View on China's Energy Situation and Energy Strategy'), *Renmin Ribao* (People's Daily), 10 August 2001, p. 7. (English translation from FBIS-CHI-2001-0810).
- ⁴⁶ CNPC's ambitious 1997 development plans included Argentina, Canada, Colombia, Ecuador, Egypt, Indonesia, Kazakhstan, Kuwait, Mexico,

Pakistan, Peru, Russia, Sudan, Thailand, United States and Venezuela; see 'China Wins Sudan Oilfield Project Bid', *Xinhua* in English, 31 January 1997, in FBIS-CHI-97-022; information on revised plans from interviews with CNPC officials in 2001.

⁴⁷ 'CPECC Completes Oilfield Project in Sudan', *Xinhua* in English, 24 July 1999, in FBIS-CHI-1999-0724.

⁴⁸ GWDC marketing brochure, 1998, cited in Xu, 'The Oil and Gas Links between Central Asia and China: A Geopolitical Perspective'.

⁴⁹ Interviews with CNPC officials in 2001.

⁵⁰ For a discussion of China's gradual, reluctant acceptance of the UN and other international organisations as useful forums for the pursuit of its own political and economic agendas in foreign policy, see Robert Boardman, *Post-Socialist World Orders* (New York: St. Martin's Press, 1994); for its changing attitudes toward the UN in light of the Gulf War see

Yitzhak Shichor, 'China and the Role of the United Nations in the Middle East', *Asian Survey*, vol. 31, no. 3, 1991, pp. 255–269.

⁵¹ For a discussion of how China has used development aid in African states to gain formal political recognition see Deborah Brautigam, *Chinese Aid and African Development* (New York: St. Martin's Press, 1998).

⁵² For the politics of switching recognition in Africa see Richard J. Payne and Cassandra R. Veney, 'China's Post-Cold War African Policy', *Asian Survey*, vol. 38, no. 9, 1998, pp. 867–879.

⁵³ See data and discussion in Richard F. Grimmett, 'Conventional Arms Transfers to Developing Nations, 1993 to 2000'; for a discussion of the changing goals of China's arms sales and a list of sales to individual countries see Daniel L. Byman and Roger Cliff, 'China's Arms Sales: Motivations and Implications' (Santa Monica, CA: RAND, 1999).

