that of India. A similar dynamic is evident in the other ‘shadow dominoes’ discussed above.

This historic trend of excess pessimism regarding proliferation ought to be kept in view when assessing the proliferation risks presented by the countries below.

**Saudi Arabia**

Regional powers fear Iran and the prospect of an Iranian nuclear weapon. However, they do so to highly varying degrees. Saudi Arabia’s fears are probably the most acute of any proliferation candidate, for reasons laid out at length earlier in this study. It is reasonable to assume that Saudi Arabia will view Iranian weaponisation as a major threat to the security, prestige and interests of the Kingdom and its allies. Moreover, Saudi Arabia’s ability to acquire a nuclear weapon exceeds that of any other relevant state, and its faith in external security guarantees is perhaps the most tenuous. For these reasons, Saudi Arabia’s role in any proliferation cascade ought to be considered the most credible.

Saudi Arabia is a member of the NPT. Although it possesses some nuclear infrastructure such as a nuclear research centre dating to 1975, and civil nuclear agreements with China, France, South Korea and Argentina, ‘the Kingdom does not appear to possess the necessary technical infrastructure to develop [a nuclear weapon] indigenously, bar significant infusions of external assistance’.  

However, Riyadh’s reported role in funding the Pakistani nuclear programme likely provides it with just that assistance, and therefore the ability to procure fissile material; the technology and equipment to produce fissile material, including centrifuges; the technology for weapons design; a nuclear weapon itself; the use of Pakistani nuclear weapons stationed on Saudi soil; or some combination thereof. There is little publicly available evidence for this nuclear relationship, but officials who would have been privy to such evidence in their formal roles suggest that it is a valid inference. Brice Riedel, a former senior CIA analyst and presidential adviser, explicitly writes that the two states ‘today have an unacknowledged nuclear partnership to provide the kingdom with a nuclear deterrent on short notice if ever needed’. Neither Riedel nor other former officials have provided evidence for such a partnership, however.

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Nevertheless, Saudi Arabia and Pakistan have a long history of security co-operation. Pakistan helped the Royal Saudi Air Force to build and pilot its first jet fighters in the 1960s, and Pakistani personnel flew Saudi aircraft during a Yemeni cross-border war in 1969. In subsequent decades, as many as 15,000 Pakistani troops were stationed in Saudi Arabia, ‘some in a brigade combat force near the Israeli-Jordanian-Saudi border’. In 1986, Pakistan’s Saudi presence comprised one division (roughly 13,000 troops), two armoured and two artillery brigades (approximately 10,000 troops), along with naval and air force personnel. Pakistani forces reportedly ‘filled out most of the 12th Saudi Armored Brigade’ based at Tabuk. This brigade reportedly left in 1988, after Saudi Arabia demanded that Pakistan send only Sunni personnel. It is unclear how many Pakistani personnel remain in Saudi Arabia, but Pakistan does provide assistance and personnel to Bahrain, which is a de facto protectorate of Saudi Arabia, and to other GCC members.

This Saudi-Pakistan security co-operation has almost certainly had a nuclear dimension. In the 1970s, Pakistani Prime Minister Zulfikar Ali Bhutto reportedly sought and received Saudi Arabian assistance in bankrolling Islamabad’s nuclear programme. As Ian Talbot, a historian of Pakistan, observes, ‘Arab money (Libyan and Saudi) was vital for Bhutto’s quest to secure a Pakistani bomb’. Furthermore, Robert Baer, a former CIA officer, has put a figure of $1 billion on Saudi funding, although he supplies no source.

125 Riedel, ‘Saudi Arabia’.
In 1998, when Pakistan was considering whether and when to respond to India’s nuclear tests, Saudi Arabia offered a supply of oil to insulate Pakistan from the costs of its decision. According to one account, ‘For three years after the 1998 nuclear tests Pakistan did not have to pay for the oil that it was provided by Saudi Arabia’.\textsuperscript{132} SIPRI estimates that the support amounted to 150,000 barrels of oil per day.\textsuperscript{133}

In 1999, Saudi Defence Minister (and later Crown Prince) Prince Sultan visited Pakistan for an unprecedented tour of nuclear facilities. There, he met with Pakistan’s preeminent nuclear scientist, A Q Khan, who was later implicated in the most serious nuclear black market activities in proliferation history.\textsuperscript{134} US officials, citing ‘a lack of clarity by Saudi Arabia when Washington asked why the minister had visited the plants, one for uranium enrichment at Kahuta and one for missiles’, were deeply alarmed at the visit.\textsuperscript{135} A Q Khan himself would visit Saudi Arabia that same year, and again in 2000.\textsuperscript{136}

In 2002, the son of then-Crown Prince (now King) Abdullah attended a test-firing of Pakistan’s medium-range, nuclear-capable Ghauri missile. Immediately after that visit, the \textit{Washington Times}, citing a ‘ranking Pakistani insider’, reported that Saudi Arabia and Pakistan ‘have concluded a secret agreement on nuclear cooperation that will provide the Saudis with nuclear-weapons technology in exchange for cheap oil’.\textsuperscript{137} Such reports have been common. In February 2012, \textit{The Times} reported that:\textsuperscript{138}

In the event of a successful Iranian nuclear test, Riyadh would immediately launch a twin-track nuclear weapons programme, \textit{The Times} has learnt. Warheads would be purchased off the shelf from abroad, with work on a new ballistic missile platform getting under way to build an immediate deterrent, according to Saudi sources. At the same time, the kingdom would upgrade its planned civil nuclear programme to include a military dimension, beginning uranium enrichment to develop weapons-grade material in the long term.


\textsuperscript{138} Hugh Tomlinson, ‘Saudi Arabia Threatens to Go Nuclear “Within Weeks” if Iran Gets the Bomb’, \textit{The Times}, 10 February 2012.
These reports are typically ambiguous as to the precise nature of this nuclear co-operation, but most assume that Saudi Arabia would purchase warheads. In 1994, a defecting Saudi diplomat, seeking political asylum in the United States, claimed that Saudi Arabia had tried to purchase nuclear research reactors from China and from a US company in 1989, with the intention of producing fissile material for weapons. However, an indigenous enrichment or reprocessing programme, even one ‘jump-started’ with Pakistani (or, more improbably, Chinese) assistance, would be a far more difficult endeavour than more direct forms of weaponisation.

Saudi Arabian policy need not depend upon the simple purchase of a warhead, as is sometimes assumed. Nuclear sharing rather than nuclear transfer, an arrangement akin to that practised by the US with its NATO allies, might be an equally workable and more legally sound option for both countries. Recall that, by the end of the 1950s, around 500 nuclear weapons were deployed to non-US NATO forces. In many cases, these allowed for ‘independent European launch’ and in 1959, President Eisenhower admitted that ‘we are willing to give, to all intents and purposes, control of the weapons. We retain titular possession only’.

As Jean-Loup Samaan points out, ‘nothing, in theory, would legally prevent [Pakistani-Saudi nuclear sharing] as long as these weapons are not under the control of the recipient country . . . Pakistan is not a party to the Non-Proliferation Treaty and, in this scenario, the Saudi interpretation of articles I and II of the NPT would be similar to the US interpretation, unchanged since the late 1960s’. These are the two articles of the NPT that prohibit signatories (including Saudi Arabia) from any transfer or receipt of nuclear weapons or assistance to that end. Since the late 1960s at least, the US has held to the legal position that, first, these injunctions do not cover nuclear-capable delivery systems, which can be legally transferred and received, and, second, that the NPT ‘would no longer be controlling when a decision were made to go to war’ (which is known as the ‘wartime exclusion’ or ‘exception’).

It is not hard to imagine Saudi Arabia proffering a similar rationale. It would be difficult to quibble with the legality, given that NATO’s own

nuclear-sharing agreements are under particular scrutiny today. Pakistan could also offer nuclear guarantees without nuclear sharing, or even without stationing nuclear forces on Saudi soil: as Bruno Tertrais observes, ‘ballistic missiles based in south-western Pakistan would have the range to cover a significant portion of the Saudi neighbourhood’. This, however, would raise problems of credibility, particularly given Pakistan’s vulnerability to Iranian missiles as a result of the two states’ proximity.

Furthermore, Saudi Arabia is the only major proliferation candidate to possess viable delivery systems for any future nuclear warheads. In 1986, Saudi Arabia purchased between fifty and sixty CSS-2 intermediate-range ballistic missiles from China after the US refused to sell missiles capable of hitting Israel.

Riyadh’s claim that, despite these missiles’ nuclear-capable origins, they had been modified by China to carry conventional payloads only are contested by many on the basis of the missiles’ inaccuracy. The CSS-2 has a circular error probable – relating to the radius of a circle into which half of the missiles are likely to land – of about 1–2 km, which would make them less accurate and cost-effective than aircraft-delivered munitions. Meanwhile, Richard Russell suggests that the ‘CSS-2 programme could serve as a basis for developing more robust ballistic-missile capabilities. It allows the Saudis to train and nurture a cadre of military personnel expert in ballistic-missile operations’. Moreover, the CSS-2 may not even be kept ‘truly operational’, and Saudi Arabia has never conducted ‘a meaningful operational test’. This further suggests that the CSS-2 is intended less as an instrument of conventional warfighting, and more as a reserve strategic capability.

Finally, Saudi Arabian officials have repeatedly made public and private statements suggesting that they would strongly consider a nuclear response to Iranian weaponisation. In 2011, for instance, former Saudi intelligence chief, Prince Turki Al-Faisal, said in reference to the prospect of Iranian weapons that ‘it is our duty toward our nation and people to

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145 NTI.org, ‘Saudi Arabia Missile Profile’, November 2011; for more detail on the deal with China, see Yitzhak Shichor, East Wind over Arabia: Origins and Implications of the Sino-Saudi Missiled Deal, China Research Monograph No. 35 (Berkeley, CA: Center for Chinese Studies, University of California, 1989).
147 Ibid., p. 75.
148 Cordesman, Western Strategic Interests in Saudi Arabia, p. 257.
consider all possible options, including the possession of these nuclear weapons. Likewise, in 2009, King Abdullah reportedly told former US Middle East envoy Dennis Ross, ‘If they [Iran] get nuclear weapons, we will get nuclear weapons’. Earlier that year, Prince Turki had asked a group of foreign diplomats in Riyadh, ‘what should the Kingdom do if Iran acquires such nuclear weapons…Invite others to station nuclear weapons in Saudi Arabia?’ As a final example, in 2007, a highly classified cable from the US embassy in Riyadh noted that ‘Saudi leaders…have made it clear that the Kingdom would be vulnerable to a nuclear-armed Iran if the Saudis did not also possess a nuclear capability’, and that their policy is partly intended ‘to buy them time to develop an independent Saudi nuclear deterrent’.

Decoding Saudi Arabian Nuclear Hints

Such signals are important. They far exceed in frequency and intensity those sent by other would-be proliferators, and may indeed reflect a determination to respond in kind to Iranian weaponisation. However, holding in view the five aforementioned factors shaping proliferation choices, these signals must be put in context. So, too, should the potential set of Saudi Arabian nuclear capabilities outlined above.

First, Saudi signals of nuclear intent are just that: signals – or specifically, efforts to shape Iranian and Western perceptions of Saudi policy, so as to deter Iranian weaponisation and encourage Western pressure on Iran to that end. In this sense, they might be seen as equivalent to Israeli threats to attack Iran, intended just as much for Western (and, specifically, American) audiences as Iranian ones. Saudi Arabia has every incentive to make such declarations, but these are costless, non-binding promises; they do not tie Saudi hands (even if they generate limited reputational costs in the event that Riyadh does not follow through on its threats). Indeed, during a February 2012 parliamentary debate in the

150 Chemi Shalev, ‘Dennis Ross: Saudi King Vowed to Obtain Nuclear Bomb after Iran’, Haaretz, 30 May 2012.
153 As Steven Cook notes, ‘What is amazing is how many people take the Saudis seriously’; see Steven A Cook, ‘Don’t Fear a Nuclear Arms Race in the Middle East’, Foreign Policy, 2 April 2012.
House of Commons, former British Foreign Secretary Jack Straw made precisely this point: 154

I hope that we hear less of the suggestion that were Iran to get a nuclear weapons capability, there would automatically be an arms race in the Middle East. I do not believe that. A senior Saudi diplomat said to me, ‘I know what we’re saying publicly, but do you really think that having told people that there is no need for us to make any direct response to Israel holding nuclear weapons, we could seriously make a case for developing a nuclear weapons capability to deal with another Muslim country?’

**Saudi Arabian Views of the US Nuclear Umbrella**
Second, if the opaque trickle of information over Saudi Arabian intentions is to be taken seriously, then it should also be noted that Riyadh clearly sees security guarantees as a viable alternative. According to the former US ambassador to Riyadh, Charles Freeman, in 2003, then-King Fahd requested a US nuclear guarantee. 155 In the same year, according to the *Guardian*, ‘a strategy paper being considered at the highest levels in Riyadh’ set out three options: first, ‘To acquire a nuclear capability as a deterrent’; second, ‘To maintain or enter into an alliance with an existing nuclear power that would offer protection’; and third, ‘To try to reach a regional agreement on having a nuclear-free Middle East’. 156

The second of these options may allude either to an agreement with Pakistan (or China) or with the United States. However, as arms-control expert Josh Pollack observes, ‘the US-Saudi relationship is one of America’s most important, enduring, and complex bilateral connections in the Middle East’. 157 Washington and Riyadh are bound by an extremely dense set of strategic, military and economic connections. 158

To be sure, some of those connections have been under strain, particularly in recent years. The Kingdom was angered and worried by what it perceived as American acquiescence in the overthrow of Hosni Mubarak in 2011. According to one American official, ‘they’ve taken it personally because they question what we’d do if they are next’. 159

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their co-operation, then, Riyadh and Washington, remain divided on questions of the threat posed by Iran, the proper response to it, and the balance between repression and political reform.\(^{160}\)

In response to regional upheaval, Saudi Arabia has worked to diversify its alliance portfolio. This has included strengthening the security aspects of the GCC, as well as expanding the grouping to take in (non-Gulf) Morocco and Jordan.\(^{161}\) However, the GCC remains an ineffectual security provider. The ‘lack of cooperation, interoperability, and serious exercise activity cripples their ability to act with any unity and makes them more of a facade than a force. It also makes them far more dependent on the US’.\(^{162}\) Although Riyadh can deepen its relationship with Russia and China over the longer term, neither of these states is in a position to provide the same degree of conventional military and political backing as the United States.

It is important to remember that episodes of Saudi mistrust of the US commitment have occurred before, and the relationship has survived. In 1979, for instance, after the fall of the Shah of Iran, the Carter administration delivered F-15 fighter aircraft to Saudi Arabia, but undercut this gesture by a presidential statement that the aircraft were not armed.\(^{163}\) It is reasonable to assume therefore that, just as it did three decades ago, the US is likely to remain the most important security provider to Saudi Arabia, and that is likely to provide Saudi Arabia with a viable alternative to seeking its own nuclear means.

**A Nuclear Saudi Arabia and Gulf Fears**

The third reason that Saudi Arabia’s signals of nuclear intent might not be entirely credible is that Riyadh faces a dilemma between nuclear self-help and collective security. This is in at least two senses.

In the first place, a nuclear Saudi Arabia would concern those Gulf States that see a stronger Saudi Arabia as reducing their own autonomy.\(^{164}\) For example, the smaller states of the Gulf Cooperation Council,


\(^{163}\) Kate Amlin, ‘Will Saudi Arabia Acquire Nuclear Weapons?’, Nuclear Threat Initiative, 1 August 2008.

particularly Oman and Qatar, have more balanced policies towards Iran. Qatar has attempted to normalise Arab relations with Iran, even inviting Iran to the GCC summit in 2007. These states are worried about Saudi Arabia’s potential ‘hegemonic overreaction’ to a nuclear Iran and the possibility that Riyadh might ‘exploit the threat from Tehran to win Washington’s recognition of Saudi pre-eminence in the Sunni Arab world’. Certainly, fears over Saudi predominance should not be underestimated: the UAE has withdrawn from a Gulf monetary union in opposition to its basing in Riyadh, and in March 2010 there occurred unprecedented naval clashes between Saudi and Emirati vessels over maritime disputes.

Whether or not these threat perceptions would remain unchanged in the aftermath of Iranian weaponisation, and whether this would prompt a balancing against Iran or a ‘bandwagoning’ with it, depends on a number of factors, such as Iran’s behaviour and the availability of security guarantees from other powers, like the United States. The Gulf States may opt for the ‘offshore balancer’, the United States, rather than the overbearing Saudi Arabia in such a scenario, leaving Saudi Arabia diplomatically isolated. Kristian Coates Ulrichsen of the LSE argues that ‘decisions taken since 1991 have integrated each of the GCC states into the American security umbrella on a bilateral basis, and undercut any residual collective approach to security’. This development further structures the Gulf States’ incentives in ways that favour the United States. It may therefore be preferable for Saudi Arabia to shun nuclear weapons, limit the fears of its neighbours, and instead lead a regional coalition backed by an American nuclear guarantee.

**US Leverage over Saudi Arabia**
The second Saudi dilemma flows from the fact that the US is the major supplier of weaponry to the Kingdom. Between 2005 and 2009, 40 per cent of Saudi Arabia’s arms imports were of American provenance (a further 42 per cent came from Britain, which, in the Middle East, is likely to follow the contours of US policy). In December 2011, the US finalised a deal to

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166 Dassa Kaye and Wehrey, ‘A Nuclear Iran’, p. 112.
168 For explanations of the terms balancing and bandwagoning, see Thomas J Christensen and Jack Snyder, ‘Chain Gangs and Passed Bucks: Predicting Alliance Patterns in Multipolarity’, *International Organization* (Vol. 44, No. 2, Spring 1990).
170 Carina Solmirano and Pieter D Wezeman, ‘Military Spending and Arms Procurement in the Gulf States’, SIPRI Fact Sheet October 2010, p. 3.
sell advanced military equipment worth $30 billion to Saudi Arabia.\textsuperscript{171} Between 1990 and 2011, US arms sales in constant prices to Saudi Arabia totalled $14.7 billion, far higher than the $4.6 billion paid to the second-highest supplier in that period, the UK.\textsuperscript{172} Arms sales do not automatically produce commensurate political leverage, but they are reflective of Saudi Arabia’s dependence on the US for its long-term, qualitative military strength.

Moreover, there is evidence that the US can, and does, successfully pressure Saudi Arabia. Richard Russell notes that ‘at least one scholar has suggested that Saudi Arabia was considering the establishment of a weapons-related nuclear infrastructure, but that strong American diplomatic intervention convinced Riyadh to abandon the idea.’\textsuperscript{173}

Another, better evidenced, example dates to 1988: when the US learnt of the earlier transfer of CSS-2 missiles to Saudi Arabia, it once more used its leverage to compel Saudi Arabia to sign the NPT as a compensatory measure. After mounting concern in Congress, congressional majorities passed resolutions against the sale of ground-support equipment for Airborne Warning and Control System aircraft that had been supplied to Saudi Arabia in 1981. The administration also suspended sale of military equipment worth another $450 million.\textsuperscript{174}

Admittedly, Saudi Arabia is insulated in at least one important respect. Its status as OPEC’s largest oil producer and the world’s second-largest oil exporter means that Saudi Arabia wields substantial influence over world oil prices, and therefore over global economic conditions. In the aftermath of Iranian weaponisation, Iran would likely be subject to even more punitive energy-related sanctions than those in force now. It would not therefore be a realistic option to similarly coerce Saudi Arabia without thereby causing politically unacceptable rises in oil prices.

However, this does not mean that Saudi Arabia could not be punished in other ways. Saudi Arabian private and official investments in the United States amount to hundreds of billions of dollars, and US personnel provide vital training for Saudi Arabian forces.\textsuperscript{175} Nevertheless, although Riyadh is not without friends in Congress, congressional concern would be directed at the security of Israel. Saudi Arabia does not have diplomatic relations with Israel, maintaining an economic boycott against


\textsuperscript{173} The original claim is that of Yair Evron, on the basis of ‘private information’, cited in Russell, ‘A Saudi Nuclear Option’, p. 78. No date is supplied.

\textsuperscript{174} Lippman, ‘Nuclear Weapons and Saudi Strategy’, p. 4; see also Shichor, \textit{East Wind over Arabia}, p. 60.

\textsuperscript{175} Lippman, \textit{ibid.}, p. 6.
the country. The nuclearisation of both Iran and Saudi Arabia would provoke alarm and fear amongst Israel’s proponents in the US. Even as the White House would likely recognise the particular importance of maintaining ties with Saudi Arabia in the aftermath of Iranian weaponisation, it would face difficulties in resisting this domestic political pressure. Riyadh would surely be wary of jeopardising ties with its pre-eminent patron and ally at the very moment that the Kingdom would be seen as being at its most vulnerable.

It should also be remembered that, although Saudi Arabia is largely insulated from economic pressure — and would be even more so in the event of a proliferation chain in the Middle East since oil prices would shoot upwards and increase oil revenue — its would-be nuclear supplier, Pakistan, is not. Even with Saudi economic assistance, Pakistan would be wary of facing further international opprobrium, given its chequered proliferation history. As one former official of the Strategic Plans Division, Pakistan’s nuclear steward, puts it, the deployment of Pakistani warheads on Saudi Arabian soil would be ‘worse than the Cuban missile crisis’, with all that implies for Pakistan’s own security.

Much would depend on the state of US-Pakistani relations. Were they to have irredeemably deteriorated, Pakistan might not consider American opprobrium and political pressure to be a particularly great deterrent. Pakistan’s civil-military balance might also be significant, with the military perhaps more incentivised to break international norms and extend assistance to Riyadh, and civilians possibly more desirous of maintaining good diplomatic relations with the international community. A final factor may be the importance of personal relationships. As the Emirati commentator Sultan Al-Qassemi notes, ‘the solid Saudi relationship with Pakistan is heavily dependent on close co-ordination between the interior and intelligence authorities of both states in which [Prince] Nayef played a significant role’. Nayef died in June 2012; if there is a lack of institutional continuity, Pakistan may question the Saudi commitment to shielding Pakistan from the consequences of proliferation.

These reasons, taken together, suggest that Saudi Arabia has strong disincentives to proliferate, and that these should be considered alongside the pressures that would undoubtedly result from Iranian weaponisation.

177 That said, A Q Khan has claimed that Pakistan’s civilian leaders, including then-Prime Minister Benazir Bhutto, approved his nuclear transfers to other states. See Rob Crilly, ‘AQ Khan Claims Benazir Bhutto Ordered Nuclear Sale’, Daily Telegraph, 17 September 2012.
Sceptics, like Edelman and Montgomery, argue that ‘the United States was able to deter a nuclear-armed Soviet Union during the Cold War, but the foundations of its security arrangements then – formal treaty guarantees and large U.S. military deployments on the territory of its allies – are unlikely to materialize again soon’.\textsuperscript{179}

This likely underestimates the degree to which the US is deeply concerned over second-order proliferation and potential Gulf appeasement of Iran, both outcomes that it fears will result from a nuclear Iran in the event of US inaction. Moreover, the US already has a history of deployments on Gulf territory, even if these have proven politically problematic in the past. Some argue that in order for nuclear guarantees to be credible, the US must station nuclear weapons on Gulf soil. This would be politically controversial and, in generating a new major role for US nuclear weapons, would undercut many of the efforts in recent years to downgrade the role of such weapons in US defence posture.\textsuperscript{180}

However, this may not even be a necessary step. US nuclear weapons have not been located in South Korea for over two decades, and were never publicly stationed in Japan; yet the US (successfully) provided extended deterrence assurance to both of these allies.\textsuperscript{181}

\textit{Egypt}

Egypt presents a more ambiguous case than Saudi Arabia. Egyptian-Iranian ties were severed in 1980 following the Iranian revolution, Egypt’s granting of sanctuary to the deposed Shah, and Iranian opposition to Egypt’s peace with Israel in the 1970s. Egyptian foreign policy under President Hosni Mubarak saw an alignment with the Saudi-led anti-Iranian bloc, which was connected both to the Mubarak regime’s pro-US orientation, and to its concern over Iran’s support of ‘rejectionist’ Palestinian groups in competition with Egypt-backed ‘moderates’.\textsuperscript{182} Mubarak once told George Mitchell, then-US envoy to the Middle East, that Iranians were ‘liars’ and that negotiations should take place only on the understanding that ‘you don’t believe a word they say’.\textsuperscript{183} In 2009, the US embassy in Cairo observed that ‘Mubarak has a visceral hatred for the Islamic

\textsuperscript{179} Edelman, Krepinevich, Jr and Montgomery, ‘The Dangers of a Nuclear Iran’.
\textsuperscript{181} Japanese ports were used, however. See Martin Fackler, ‘Japan Says It Allowed U.S. Nuclear Ships to Port’, \textit{New York Times}, 9 March 2010.