ANALYZING THE 2005-2008 U.S.-INDO CIVIL NUCLEAR COOPERATION DEAL
AS A MODEL FOR DEALING WITH NUCLEAR RISING POWERS

A Thesis
submitted to the Faculty of the
Graduate School of Arts and Sciences
of Georgetown University in partial fulfillment of the requirements for the
degree of
Master of Arts
in Security Studies

By

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Washington, D.C.
April 15, 2011
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ABSTRACT

Post 9/11, the United States and India overcame their traditional stances towards each other. Convergence of mutual interests in international politics, such as promoting democracy and fighting terrorism has led both countries to forge a strategic partnership. Collaboration extends across the economy, technology, and energy, sectors and includes a controversial civil nuclear cooperation deal. Since the deal, India is now the only country that can trade in nuclear materials without being a signatory to the Nuclear Non-proliferation Treaty.\(^1\) As a result, critics of the 2005-2008 deal are most concerned with its likely impact on the Nuclear Non-Proliferation Treaty and stability in South Asia. This paper analyzes the US-Indo nuclear cooperation deal present-day and its impact on military developments and deterrence stability in both Pakistan and South Asia.

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GLOSSARY OF TERMS AND ABBREVIATIONS

AEA ........................................................................ Atomic Energy Act

BJP ........................................................................ Bharatiya Janta Party

CD ........................................................................ Conference Disarmament

CSC ....................................................................... Convention on Supplementary Compensation

CTBT ..................................................................... Comprehensive Test Ban Treaty

FMCT ..................................................................... Fissile Material Cutoff Treaty

ISSA .................................................................... India Specific Safeguards Agreement

NDA ..................................................................... National Democratic Alliance

NNPA .................................................................... Nuclear Non Proliferation Act

NSG ..................................................................... Nuclear Suppliers Group

NPT ..................................................................... Nuclear Non Proliferation Treaty

IAEA .................................................................. International Atomic Energy Agency

RAVV ..................................................................... Rajasthan Atomic Power Plant

SASSI ................................................................. South Asian Strategic Stability Institute
THE US-INDO CIVIL NUCLEAR COOPERATION DEAL:

On 18 July 2005, the United States and India jointly announced their plan for a future strategic partnership. This new multifaceted and cooperative framework envisaged strategic, energy and economic components and resulted in the controversial civil nuclear cooperation agreement also known as the Indo-US ‘123 Agreement. The agreement was controversial because, after years of sanctioning India for its nuclear weapons program, the US government was suddenly lifting sanctions, formally accepting India’s nuclear weapons status, and indirectly giving the weapons program a green light. Ashley Tellis, a senior adviser to the US Undersecretary of State for political affairs who was intimately involved in negotiating the civil nuclear agreement with India said, “Congress should not support any amendments that are intended to limit… India’s capacity to produce fissile materials for its nuclear weapons program…Accordingly, any effort to stipulate that an Indian fissile materials production moratorium would be a precondition for implementing the deal, in effect, functions as a ‘poison pill’ that would sunder the accord.” In the same way, the Indian administration argued, “No constraint has been placed on our right to construct new facilities for strategic purposes.” Michael Krepon, a leading critic of the US-Indo nuclear cooperation deal of the Stimson Institute quipped, “it’s a sweetheart deal for India… the Administration told Congress that the agreement would be about the growth of India’s electricity… not the growth of Indian bomb making potential…”

The overall and summarized terms of the agreement are as follows:

1) India agrees to allow inspectors from the International Atomic Energy Association (IAEA), access to its civilian nuclear program, which is part of the 2,

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2) India also promises that all future civilian thermal and breeder reactors would be permanently placed under IAEA safeguards. Military facilities-and stockpiles of nuclear fuel that India has produced up to now -- (2008) -- will be exempt from inspections or safeguards

3) India commits to negotiating and signing an Additional Protocol (PDF)-which allows more intrusive IAEA inspections-of its civilian facilities

4) India agrees to continue its moratorium on nuclear weapons testing

5) India commits to strengthening the security of its nuclear arsenals.

6) India works toward negotiating a Fissile Material Cutoff Treaty (FMCT) with the United States banning the production of fissile material for weapons purposes. India agrees to prevent the spread of enrichment and reprocessing technologies to states that don't possess them and to support international nonproliferation efforts.

7) U.S. companies will be allowed to build nuclear reactors in India and provide nuclear fuel for its civilian energy program.

8) In return for India’s concurrence on terms of the deal, India would be allowed to buy dual-use technology such as material and equipment from the United States and from other nuclear proficient countries like Russia, Canada, and Europe that could be used to enrich uranium, potentially creating the material for nuclear bomb. India would also be able to import fuel for its nuclear reactors.

The nuclear deal, part of the overall energy agreement, attracted the most attention and debate due to serious implications for the non-proliferation regime and concern for stability in South Asia. From the time the deal was announced in 2005 up until it was formally ratified in 2008, US experts were divided on the wisdom of the US policy shift, with some warning that the repercussions could be disastrous.

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4 Ibid
5 Ibid
CLAIM:

Now, three years later, it is useful to evaluate whether the terms of the deal have been kept and how the agreement has affected nuclear proliferation and the political dynamics in South Asia. After all, Pakistan's nuclear arsenal has reportedly doubled to more than 100 weapons, surpassing India’s.\(^6\) According to the *New York Times* and *Washington Post*, Pakistan appears on track to soon outrun Britain as the world’s fifth largest nuclear power.\(^7\) Is this a sign of blowback from the deal? Were the critics of the 2005 deal right?

This thesis explores the extent to which the new US-India détente on civilian nuclear energy has affected military developments and deterrence stability in South Asia. I have studied the consequences of the 2005 US-Indo nuclear cooperation deal because I want to know whether the growth in Pakistani nuclear capabilities represents blowback from the deal and, if so, whether such negative effects outweighed the gains from the deal. I have concluded that the deal offers a poor model for dealing with rising nuclear powers in the future. This study is important because, though advocates focused on the gains for US-Indian relations, critics warned that the agreement could deal a serious blow to the international nonproliferation regime” and “set a damaging precedent for countries with nuclear aspirations like Pakistan and North Korea.”\(^8\)

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My review of the evidence to date suggests that the critics were right. While the US-Indo nuclear deal has bolstered a strategic partnership between the US and India, it has also probably contributed to a significant increase in Pakistan’s nuclear stockpile, which now surpasses India’s. The deal has also frustrated efforts to thwart increased production of fissile material and has provoked an unprecedented arms race in the South Asian subcontinent.

LITERATURE REVIEW:

Given Pakistan’s instability and the inherent risks in confrontation between nuclear-armed Pakistan and India, it is surprising that detailed analysis of the dynamics triggered by the deal have gone largely unevaluated. Although nascent, the literature on the US-Indo civilian nuclear agreement largely focuses on three assertions: (1) That the deal will serve to normalize India’s status as a nuclear weapon state outside the NPT; (2) That it will therefore undermine the NPT and the larger nonproliferation regime; and (3) That it may serve to increase the production of India’s potential nuclear weapon capabilities, and thus thwart international efforts to cease the production of fissile materials for nuclear weapons.9 Comparatively few analyses explore the nuclear agreement as it relates to Pakistan’s nuclear response.

Other works such as Ashton B. Carter’s “America’s New Strategic Partner, and Prashant Hosur’s “The Indo-US civilian nuclear agreement What’s the big deal” highlight the positive strategic consequences of the deal, such as focusing on the gains of the bilateral strategic partnership between the US and India in areas of commerce,

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technology, and energy. Both of these articles also highlight the benefit of bringing India, an NPT-outlier, into the nuclear proliferation regime to avoid nuclear proliferation risks.

Furthermore, the literature fails to thoroughly explore how the deal influences the rest of the South Asian subcontinent, a point that Scott Sagan makes in his article, “Inside Nuclear South Asia.” Sagan examines the implications for nuclear proliferation and argues the presence of nuclear weapons in South Asia has “increased low-level violence, further destabilizing the region.” In “India and Pakistan’s Unstable Peace,” S. Paul Kapur observes that the presence of nuclear weapons in South Asia makes regional conflict more costly.

A September 2006 report by Ramana, “Fissile Materials in South Asia: The Implications of the U.S.-India Nuclear Deal,” noted the gaps in the literature, and observed: “The nuclear agreement has extracted great concern from Pakistan which has demanded from the US and been refused the same deal as it being offered to India.” Additionally, Ramana provides verbal diplomatic exchanges underlining serious repercussions to the nonproliferation regime and security of South Asia should Pakistan be denied the same deal. This report traces the impact the deal had on Pakistan’s policies. Assessing Pakistan’s response to India's nuclear cooperation deal with the United States is challenging and necessarily tentative, yet it is nonetheless crucial to understanding the continuing violence and instability in Pakistan.11


11 For example, Pakistan deliberately refused to support negotiations in the Conference of Disarmament (CD) in 2010 and cited India’s recently acquired ability to expand its nuclear arsenal as a reason for refusing to support the CD, which operates by consensus, on a Fissile Material Cutoff Treaty (FMCT). Kerr, Paul K., and Mary Beth Nikitin. "Pakistan’s Nuclear Weapons: Proliferation and Security Issues."
ROADMAP:

To substantiate the claim that the deal has increased instability in South Asia, this paper examines: (1) the deal’s effect on Indo-Pak nuclear relations and Pakistan’s perception of security with regards to the survivability of its strategic deterrent; (2) The future of the nonproliferation regime and what this means for other nuclear rising powers that are not party to the NPT; and (3) the threat to deterrence stability in South Asia. The paper first provides a historic background and then a status report on the US-Indo Nuclear cooperation deal and then discusses those findings. The second part discusses whether the critics’ projections of losses and gains from the deal have panned out by dividing the paper into the negative and positive strategic consequences as a result of the deal. The last section provides a policy prescription for policymakers. The analysis helps policymakers realize why the deal serves as a poor model when dealing with other nuclear rising powers, such as Pakistan, in the future. To avoid confusing longstanding Pakistani nuclear policies with reactions to the US-India deal, I have mapped Pakistan’s responses to India’s 1974 and 1998 nuclear tests and used these reactions to calibrate Pakistan’s reaction to India’s nuclear deal post 2005.

To analyze whether the expected benefits of the deal are being obtained, I uncovered the status of IAEA inspections on India’s nuclear facilities and their significance to determine if the deal has slowed or increased India’s cooperation on non-proliferation endeavors, including observance of nuclear export standards imposed by the NSG. More generally, I assess the degree to which India has facilitated US diplomacy in the region since the deal was made, by examining instances when India’s interests

diverged from those of the US, but India accommodated US interests nonetheless. In instances where there were inconsistencies with the overall terms of the deal, I sought both rhetorical statements and other evidence, which suggested the heightened cooperation, reflected a tighter strategic partnership brought about by the 2005 deal.

To determine whether the above-expected downsides of the deal have developed, I examined the status of India’s safeguards by addressing to which facilities --whether nuclear or civil-- these safeguards apply. Additionally, it was important to note whether these safeguards applied post or pre 2005. I addressed whether the deal truly intended to restrict India’s production of fissile material and the number of weapons it planned to produce based on whether or not India followed through with its Separation Plan.

Moreover, I uncovered both rhetorical statements and other evidence that suggested the deal may have thwarted international efforts to cease the production of fissile materials for nuclear weapons. Specifically, I investigated whether India had engaged in any serious negotiations with the US to conclude a multilateral Fissile Material Cut-Off Treaty, which brought to light whether or not the deal actually required India to limit its production of fissile material.

In order to further understand and anticipate Pakistan’s response to the nuclear deal, concurrently with the above analysis, I determined whether or not Pakistan had always planned to increase its nuclear stockpile as a means of preserving its national security policy by examining Pakistan’s strategy for ensuring the survivability and security of its nuclear deterrent. This question is important because it allows the reader to evaluate the gains and losses of the deal as it relates to Pakistan national security vis-à-vis its relationship with India and South Asia as a whole. One-way to test this is
quantitatively. I measured whether or not Pakistan has steadily been increasing its defense apparatus and if possible, nuclear stockpiles over the years by addressing the increase or decrease in weapons it maintains.

Since the 2005 verbal exchange on the deal, Pakistan has appeared to be building a third plutonium nuclear reactor to significantly boost its production of atomic bombs. Satellite images reveal work progressing at Khusab, 60 miles from Islamabad, where the other two reactors are located. More recently, Pakistan has been working with China, which has extended plans for a fourth and fifth nuclear reactor. Although Pakistan does not publicly release its defense spending records, a credible government database such as the Bulletin of Atomic Scientists provided me with good information.

**HISTORICAL BACKGROUND:**

Policies are often known to change with changes in the distribution of power among states. In fact, political realists argue that, whenever policies conflict with the interests of the state, interests will tend to prevail while policies are apt to change. The formation of a US-Indo bilateral strategic partnership in the 21st century likely came about as a result of the September 11, 2001, terrorist attacks on the United States, which abruptly forced state priorities and interests to change. This sudden change resulted in the convergence of US Indo strategic-interests such as promoting democracy and fighting terrorism.

The turning point in US-Indo relations formally began when on July 18 2005, President Bush announced the creation of a global partnership with India in a joint

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statement with Prime Minister Manmohan Singh. President Bush highlighted the “significance of civilian nuclear energy for meeting growing global energy demands,” and said he would “work to achieve full civil nuclear energy cooperation with India.” The announcement of a US-Indo partnership demonstrated a bold foreign policy initiative, whereby the President was predisposed to “seek agreement from Congress to adjust U.S. laws and policies.” Implementing these policy changes was contentious. Both U.S. law and the export guidelines of the Nuclear Suppliers Group (NSG) restricted nuclear cooperation with India because India possessed nuclear weapons and was not a recognized nuclear weapon-state under the nuclear Nonproliferation Treaty (NPT).  

Passage of the Henry J. Hyde United States-India Peaceful Atomic Energy Cooperation Act of 2006 (P.L. 109-401), which then-President Bush signed into law December 18, 2006, provided the President with the means to waive a U.S. nuclear cooperation agreement with India from several requirements of the Atomic Energy Act (AEA) of 1954, as amended. On 27 July 2007 the United States and India agreed on the text of such an agreement, which was later passed to Congress on 10 September 2008. President Bush also determined that P.L. 109-401’s requirements for the President to exercise his waiver authority have been met. The agreement was submitted on 1

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15 These requirements are: (1) provision of a credible separation plan for India’s nuclear facilities; (2) approval by the IAEA Board of Governors of India’s new nuclear safeguards agreement; (3) substantial Indian progress toward concluding an Additional Protocol to its safeguards agreement; (4) India’s active support for the conclusion of a treaty to ban fissile material production for nuclear weapons; (5) India’s support for U.S. and international efforts to halt the spread of sensitive nuclear fuel cycle technologies (enrichment and reprocessing); (6) India taking necessary steps to secure nuclear and other sensitive materials and technologies through adherence to multilateral control regimes, such as the NSG and the Missile Technology Control Regime; and (7) a consensus decision by the NSG to except India from some of the Group’s export control guidelines.
August 2008 after the IAEA Board of Governors approved India’s safeguards agreement. In late September 2008, the NSG exempted India from the group’s export guidelines.

On 27 September 2008, the House passed H.R. 7081, which approved the agreement and waived “the provisions for congressional consideration and approval of a proposed agreement” contained in Sections 123 b. and 123 d. of the AEA.  

On 23 September, the Senate Foreign Relations Committee had approved identical legislation, S. 3548, and on 1 October passed H.R. 7081 by a vote of 86-13. On October 8, President Bush signed P.L. 110-369, the United States-India Nuclear Cooperation Approval and Nonproliferation Enhancement Act, into law.

According to its text, the July 2007 agreement “shall enter into force on the date on which the Parties exchange diplomatic notes informing each other that they have completed all applicable requirements for its entry into force.” As a result, on 20 October, President Bush transmitted two certifications required by P.L. 110-369 in order for both the US and Indian government to exchange diplomatic notes. The agreement finally came into force on 6 December 2008 when Washington and New Delhi exchanged diplomatic notes. Given the above historic context, it may not have been surprising for state policies to change -- including the US thirty-year moratorium on nuclear trade with India --, instability in South Asia has remained a constant.

The South Asian subcontinent is far from stable. Recall, both India and Pakistan emerged out of a bloody partition from British India in 1947, which has left hundreds of thousands dead, and millions displaced.  

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16 Procedures for congressional approval of the nuclear cooperation agreement are found in both P.L. 109-401 and the Atomic Energy Agency.

two countries, which has been exacerbated by decades of hostility. Tensions stem from four wars and an ongoing territorial conflict in Kashmir between Indian security forces and Pakistan backed insurgents.\(^\text{18}\) There is persistent low-level military conflict due to Pakistan reportedly supporting a Muslim rebellion in Kashmir.

In view of South Asia’s long-violent history, the US has sought to influence Pak-Indo affairs and help resolve its’ major crises. However, the sometimes amicable relationship between the US and Pakistan frequently marred US-Indian relations. In spite of this, the US has helped defuse tension between both Pakistan and India and assisted in resolving the 1990 Kashmir crisis, the 1999 Kargil conflict, the 2001-2002 India-Pakistan military standoff, and the 2008 Mumbai terrorism attack.\(^\text{19}\) “All of these incidents had nuclear implications, and the US was a powerful factor in diffusing the tension,” said Wilson Center Fellow Bhumitra Chakma.\(^\text{20}\) Despite US efforts however, “We’ve been playing Russian roulette between India and Pakistan for the last decade.”\(^\text{21}\) Bruce Riedel, a senior fellow from the Brookings Institute suspects “Sooner or later the continued instability in the region is going to lead to another mass casualty terrorist attack and, “…terrorists may set the world on a course toward -- a nuclear -- Armageddon.”\(^\text{22}\) In short, each crisis between Pakistan and India has the potential to escalate into a nuclear war.

\(^{18}\) Ibid
\(^{19}\) Ibid
\(^{22}\) Ibid; during Bruce Riedel’s 18 January 2011 book event he explained his concern of global jihad and the prospect of nuclear terrorism in Pakistan given the instability in the region.
History reveals the US’s capricious and often-volatile policies with respect to India and its nuclear program. After the establishment of India’s Atomic Energy Commission (AEC) in 1948, India immediately began pursuing dual use—both civilian and military applications of nuclear energy. In 1950 with Canadian assistance under the Colombo Plan, India developed its first indigenous research reactor known as Aspara. Nevertheless, it was not until the Sino-Indian war of 1962 and the fears of a nuclear China that the US began in 1963 to provide significant assistance to the Indian nuclear program in 1963 under the auspices of the US policy of “Atoms for Peace.” Under the deal, the US brought “assistance in training, materials and technical know how such as, a plutonium reprocessing facility and the fabrication of a limited number of plutonium fuel elements for the Tarapur/Rjasthan” nuclear reactors. The US also provided nuclear fuel for two US-supplied light-water reactors at the Tarapur power station. Still, as the US was working with India to further develop its civilian nuclear program, a crushing defeat in a border war with China followed by China’s first nuclear test in 1964, intensified India’s drive to acquire nuclear weapons, and thus undermined US-Indo relations.

India refused to join the 1970 nuclear Nonproliferation Treaty (NPT). The NPT characterizes a nuclear-weapon state as “one which has manufactured and exploded a nuclear weapon or other nuclear explosive device” prior to 1 January 1967. The treaty permits NPT states (China, France, Russia, the United Kingdom, and the United States) to retain their nuclear weapons, as long as they pursue negotiations “in good faith” on nuclear disarmament by an unspecified date. All other parties refusing to abide by the

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23 Dual use technology refers to the possibility of military use of civilian nuclear power technology.  
24 Ibid  
NPT—including India—are considered non-nuclear-weapon states. Nonetheless, in response to China’s nuclear weapons test and despite US efforts to restrict India’s aggressive posture towards acquiring and testing nuclear weapons, India successfully conducted what it called a “peaceful” nuclear explosion (PNE) at Pokharan in 1974. India had produced the plutonium for its test using materials it had obtained from Canada and the US under the peaceful-use commitment. Thereafter, US-Indo relations took a nosedive and foreign assistance to India dwindled.

Triggered by the nuclear explosion in 1974, the US cut off nuclear trade with India. As a means to avoid similar incidents, the US formed the Nuclear Suppliers Group (NSG), a voluntary nuclear export regime, in 1975. The NSG published guidelines in 1978 “to apply to nuclear transfers for peaceful purposes to help ensure that such transfers would not be diverted to unsafeguarded nuclear fuel cycle or nuclear explosive activities.” Congress responded to the PNE by enacting the Nuclear Non-Proliferation Act of 1978 (NNPA, P.L. 95-242), which imposed tough new requirements for U.S. nuclear exports to non-nuclear-weapon states. The NNPA limited nuclear collaboration between the US and India and also imposed strict sanctions on any country that was deemed a proliferator. The presumption of the NNPA was that a range of safeguards was not enough to prevent proliferation. Moreover, only full-scope safeguards and therefore membership in the NPT could ensure peaceful uses; note, the NSG’s nonbinding set of guidelines for nuclear exports did not require full-scope safeguards as a

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28 Ibid
condition of supply until 1992. 29 At the time the NNPA was passed, the US had been supplying fuel to India for the US-built Tarapur reactors. Thereafter, the US quietly facilitated fuel supply by other countries.30

Although the NPT requires safeguards on nuclear know-how and materials going to non-nuclear-weapon states, it does not explicitly bar nuclear commerce with states that remain outside the NPT. Nevertheless, at the 1995 NPT Review and Extension Conference, members stated that non-NPT countries should not be eligible for the same kinds of assistance as NPT parties in good standing. In any event, India tested several nuclear weapons on 11 and 13 May 1998. Islamabad responded on 28 and 30 May 1998, with six nuclear tests in western Pakistan. Test yields were about 10 kilotons and 5 kilotons, according to seismic analysis.31 Pakistan’s nuclear response heightened concern with regards to an arms race between Pakistan and India.

The US imposed additional sanctions after the tests, but these were lifted after 9/11. Later that year in 1998, the UN Security Council passed Resolution 1172, which called upon India and Pakistan to “stop their nuclear weapon development programs, to refrain from weaponization or from the deployment of nuclear weapons, to cease development of ballistic missiles capable of delivering nuclear weapons and any further production of fissile material for nuclear weapons.” 32

29 Ibid
Pakistan’s nuclear energy program dates back to the 1950s, but it was the loss of East Pakistan -- now Bangladesh -- in a war with India that probably triggered the January 1972 political decision just one month later to embark on a secret nuclear weapons program.33 One of the main motivations for Pakistan’s nuclear weapons arsenal today, stems from the instability introduced by India’s nuclear weapons program. In addition to pursuing nuclear energy since at least the 1950’s, Islamabad has also been augmenting its’ inferior conventional forces so that it can contend against its formidable nuclear rival, India. India’s nuclear test appears to have been the pivotal development that gave additional urgency to Pakistan’s nuclear program. Islamabad gained enrichment-related technology from many sources to include technology from China and Europe.34

THE US-INDO NUCLEAR DEAL- A STATUS REPORT:

The formation of the US-Indo strategic partnership was hailed as a significant by product of the Indo-US nuclear deal in July 2005. Efforts to create a strategic partnership with India date back to the Clinton presidency although India’s 1998 nuclear tests temporarily halted them.35 Advocates agreed that expanding the partnership between India and the United States was natural because they had so many common interests, including aspiring nuclear capabilities. India yearned for legitimization of its strategic nuclear weapons program and insisted that the US had to lift restrictions on US nuclear

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33 Ibid; highly enriched uranium (HEU) is one of two types of fissile material used in nuclear weapons; the other is plutonium. The country’s main enrichment facility is a centrifuge plant located at Kahuta; Pakistan may have other enrichment sites.

34 Ibid; Pakistan produced fissile material for its nuclear weapons using gas-centrifuge-based uranium enrichment technology, which it mastered by the mid-1980s. This extensive assistance is reported to have included uranium enrichment technology from Europe, blueprints for a small nuclear weapon from China, and missile technology from China.

trade. US policy, at least until the Bush administration, dismissed India’s request and stressed freezing or rolling back India’s nuclear weapons program. To strike a balance on the nuclear proliferation issue, proponents of the deal recommended that the US abandon its restrictions on global nuclear trade while asking for minimal nonproliferation commitments from India.

The salient details of the deal are contained within the joint statement of 18 July 2005 issued by India and the United States, which also envisaged bilateral cooperation in other areas like agriculture, environment, disaster relief, Weapons of Mass Destruction (WMD) non-proliferation, high technology, and space. However, the emphasis on civil nuclear technology cooperation was highlighted up front, and constituted one half of the joint statement.

Within the Joint Statement, the US acknowledged India to be ‘a responsible state with advanced nuclear technology,’ “obfuscating the reality that it cannot be recognized as a de jure nuclear weapon state.” America pledged that India ‘should acquire the same benefits and advantages as other such states,’ and the President said he ‘will work with friends and allies to adjust international regimes’ to facilitate civil nuclear energy cooperation and trade with India, including uranium fuel supplies for the safeguarded

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36 Ibid
38 Chari, P. R. Indo-US Nuclear Deal: Seeking Synergy in Bilateralism. New Delhi: Routledge, 2009. Print. Pg 5: Chari is currently Research Professor at the Institute of Peace and Conflict Studies (IPCS), in New Delhi, India. He was formerly part of the Indian Administrative Service, and has been Director, Institute of Defense Studies and Analyses (IDSA) and Research Professor at the Center for Policy Research. He served in several senior positions in the Central and State Governments, including the Ministry of Defense, where he was Additional Secretary. He has co-authored Four crises and a Peace Process: American Engagement in South Asia (2007) and Making Borders Irrelevant in Kashmir (2008), and has co-edited Armed Conflicts in South Asia 2008: Growing Violence (Routledge 2008).
39 Ibid
light water reactors in Tarapur.\textsuperscript{40} India in return, agreed to ‘assume the same responsibilities and practices and acquire the same benefits and advantages as other leading countries with advanced nuclear technology, such as the United States.’ Further responsibilities India subscribed to included continuing its nuclear test moratorium, supporting US efforts on a treaty to ban the production of fissile material for nuclear weapons, and separate its civilian and military programs, and material, under the IAEA safeguards -- all of which are discussed in further detail below.\textsuperscript{41}

The extent to which the overall terms of the deal were met is crucial to understanding where the US-Indo Nuclear deal stands today.

1. The Separation Plan: India agreed to a credible separation plan (6 March 2008) for India’s civil and weapons-related nuclear facilities and to allow inspectors from the IAEA, access to its civilian nuclear program.

India's nuclear industry has been largely without IAEA safeguards, though four nuclear power plants to include two reactors each at Tarapur, Rawatbhatta and Koodankulam built with US, Canadian and Russian assistance respectively, have been under facility-specific arrangements related to India's INFCIRC/66 safeguards agreement with IAEA. In October 2009 India's new safeguards agreement with the IAEA became operational, with the government confirming that 14 reactors out of a total of 22 will be put under the India Specific Safeguards Agreement by 2014.\textsuperscript{42} According to this ruling, all future commercial power reactors would also be placed under international safeguards.

According to the Sui-Muto statement made by Prime Minister Singh on 07 March 2006, these facilities,

\textsuperscript{40} Ibid
\textsuperscript{42} Please see http://www.world-nuclear.org/info/inf53.html
“…will be placed under safeguards by 2014 in a phased manner. This would raise the total installed thermal power capacity in Megawatts under safeguards from 19% at present to 65% by 2014. I wish to emphasize that the choice of specific nuclear reactors and the phases in which they would be placed under safeguards is an Indian decision. We are preparing a list of 14 reactors that would be offered for safeguards between 2006-14.”

The separation plan stated that India would begin placing facilities under safeguards in 2006 and complete the process in 2014. However, since the IAEA did not approve New Delhi’s safeguards agreement until 2008, India updated that timeline. By not naming and identifying the facilities in the safeguards agreement in advance, there is an open question as to which other facilities India will choose to separate and when they will act. This has legal implications because the United States is prohibited by law and by its NPT obligations from maintaining nuclear commerce and exchanges with any facility not named in India’s safeguards agreement.

Last year, India decided to place the Rajasthan Atomic Power Plant’s Units 3 and 4 in Rawatbhata under the India Specific Safeguards Agreement (ISSA) of IAEA, which is in accordance with the separation plan of Indo-US civilian nuclear deal. “In 2010, the two units of Rajasthan Atomic Power Plant (RAPP) at Rawatbhata will be placed under ISSA and the process has already begun, “Nuclear Power Corporation of India Limited (NPCIL) officials said. IAEA officials would be granted access to these sites in order to monitor for appropriate safeguard placement; Tarapur Atomic Power station units 1

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46 Please note although the process has begun for separating and placing units 3 and 4 of Rawatbhata civilian facilities under safeguards, it is still not official, therefore units 3 and 4 are not included in the overall eight safeguarded facilities discussed above.
and 2, RAPP units 1 and 2 and Kudankulam Atomic Power station Units 1 and 2, were also brought under the umbrella agreement of ISSA last year. At present, a total of eight out of that 14 - including units 5 and 6 of RAPP - are already under international safeguards since last year.

India also ascertained it would phase out its’ CIRUS reactor by 2014. The CIRUS reactor went critical in 1960 and is capable of producing up to 10kg of weapons-grade plutonium in its spent fuel annually. 47 CIRUS does not subscribe to IAEA safeguards, however, a 1956 Indo-Canadian agreement prohibits the use of plutonium produced in the reactor for non-peaceful purposes. Nonetheless, the agreement includes no enforcement mechanism and India has interpreted the prohibition to exclude “peaceful nuclear explosions.” As previously discussed, India used plutonium produced in the CIRUS reactor for its 1974 nuclear test, which provoked Canada to rescind all nuclear cooperation with India, including nuclear fuel shipments.

2. Future Commitments: India also promised that all future civilian thermal and breeder reactors would be permanently placed under IAEA safeguards.

On 7 March 2006, referring to future thermal and breeder reactors, the Indian prime minister said New Delhi "retains the sole right to determine such reactors -- thermal and breeder reactors -- as civilian," and according to him this means “India will not be constrained in any way in building future nuclear facilities, whether civilian or military, as per our national requirements." Military facilities-and stockpiles of nuclear fuel that India has produced up to now -- (2008) -- will be exempt from inspections or

47 Please see http://knol.google.com/k/indian-nuclear-reactors#List_of_Reactors
Although India refuses to alter its original plans to massively build up its nuclear arsenal, following the crisis at Fukushima Daiichi nuclear power complex in Japan, it may consider implementing “additional safeguards” to some of its nuclear plants to prevent catastrophe. The minister for Environment and Forests for India said "We should go beyond the immediate crisis, which has hit the nuclear industry, and recognize that the nuclear option is one we cannot foreclose," and if additional safeguards are needed as part of environment clearance, we will certainly look at it."

3. The Additional Protocol: India committed to negotiating and signing an Additional Protocol (PDF) to enhance the safeguarding of its civilian nuclear facilities.

On 3 March 2009, the IAEA approved an additional protocol to India's safeguards agreement, which allows for more intrusive IAEA inspections on its civilian nuclear facilities. As previously addressed, New Delhi reached an "India-specific" agreement with the IAEA in 2008 to place some of its nuclear facilities under safeguards while other facilities remain available for use for India's nuclear weapons efforts (March 2006 Separation Plan). That agreement allowed for the NSG to adopt an exemption for sharing nuclear technology with India. Although the additional protocol is considered a voluntary measure, U.S. legislation in 2006 stipulated that India must make "substantial

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49 Please See <http://online.wsj.com/article/SB10001424052748704662604576201942967729076.html>. India has 20 nuclear power reactors with a capacity of 4,780 megawatts, which are operated by state-run Nuclear Power Corp. of India Ltd. as the country doesn't let private sector companies operate nuclear plants. India aims to expand its nuclear power generating capacity to 63,000 megawatts by 2032.

50 Ibid

progress toward concluding an additional protocol consistent with IAEA principles, practices, and policies that would apply to India's civil nuclear program" before the United States could engage in nuclear trade with India.\textsuperscript{52} India’s 2009 additional protocol is significantly different from the 1997 Model Additional Protocol, which was supposed to serve as the basis for such an agreement. This is important because many of the crucial provisions contained in the earlier model are missing from the new protocol agreement.

Many of the provisions not contained in the Indian additional protocol were intended to provide the IAEA with the means to inspect and detect covert nuclear activities. Reporting provisions of the model protocol not included in India's Additional protocol agreement cover information such as nuclear fuel-cycle-related research and development, nuclear-related imports, and uranium mining.\textsuperscript{53} The new agreement was missing what kinds of activities and facilities India would have to report to the IAEA, and any complementary access provisions, which would grant the IAEA with the authority to inspect undeclared facilities. Within the additional protocol, India only agreed to share information on nuclear-related exports. Hence, despite India’s efforts in signing this new additional protocol, it appears as though, like other non-NPT states, it will persist to continue its’ undeclared nuclear activities outside of the IAEA appropriate safeguards.

4. Moratorium on Testing: India agrees to continue its moratorium on nuclear weapons testing


\textsuperscript{53} Ibid
The US government has made it clear that it expects India to adhere to its unilateral moratorium on nuclear testing, but would not explain whether it would cut off supplies in the event of India doing so. Moreover, India's own moratorium on nuclear testing was one of the reasons why the civilian nuclear agreement was signed between the two countries and that it looked forward to the moratorium continuing. The 123 Agreement does not bring up nuclear testing at all, therefore it also avoids discussing the provision and consequences of a peaceful nuclear explosion (PNE) and whether conducting another PNE would contradict India’s moratorium on nuclear testing.

Article 14 of the agreement provides for termination for a material violation of the agreement itself or a violation of an IAEA safeguards agreement, but it also provides for consultations to "consider carefully the circumstances that may lead to termination or cessation of cooperation". In other words, the terms for termination are open to discussion depending on what kind of test India conducts and why New Delhi carried it out. India and the United States "agreed to take into account whether the circumstances that may lead to termination or cessation resulted from a Party's serious concern about a changed security environment or as a response to similar actions by other States which could impact national security."

In the event of termination, the agreement gives the two sides "the right to require the return by the other Party of any nuclear material, equipment, non-nuclear material or components transferred under this Agreement and any special fissionable material produced through their use."

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54 For additional information on India's unilateral moratorium on nuclear testing please see http://ibnlive.in.com/news/us-expects-india-to-stick-to-moratorium-on-nuclear-tests/72903-2.html
55 Ibid
As discussed above, although the nuclear deal does not require India to give up its nuclear weapons program, future testing by India would, per US law, prompt the US to cease nuclear trade with India. Republican Senator Richard Lugar commented that the deal was a good way for India to refrain from nuclear testing in the future, because it asks India to continue to adhere to its unilateral moratorium on nuclear testing. However, there is room for contention here as the Indian government has publicly asserted since the deal does not provide provisions for nuclear testing, it does not prevent India from conducting nuclear tests. More concerning, according to a Council on Foreign Relations publication, “The US senate rejected an amendment that would require US nuclear supplies to be cut off if India tests nuclear weapons. Therefore, the 123 Agreement does not force the US to cut off nuclear trade with India even if it neglects to adhere to the moratorium on nuclear testing. Although the US-Indo deal is not conditional upon that decision, it is emphasized within the 2006 Hyde Act, which gave the deal the initial approval.

(5) Fissile Material Cutoff Treaty: India works toward negotiating a Fissile Material Cutoff Treaty (FMCT) with the United States banning the production of fissile material for weapons purposes. India agrees to prevent the spread of enrichment and reprocessing technologies to states that don't possess them and to support international Nonproliferation efforts.

India’s continued reluctance to declare a moratorium on nuclear testing and its insistence on a multilateral verifiable FMCT seems to be an attempt to exploit an...
extended window of opportunity. As long as the major parties within the NPT do not resolve their differences and reach a consensus with respect to the Conference for Disarmament (CD), which operates by consensus, on a Fissile Material Cutoff Treaty (FMCT), India will maintain the status quo. In other words, unless the FMCT is negotiated, India is under no obligation to halt production of fissile material.\textsuperscript{59} The US, Britain, France, Russia, and China say they have halted the production of the fissile material that goes into nuclear bombs, while India has only promised to join universal ban that would include Pakistan, if such a thing ever materializes\textsuperscript{60}

The US remains committed to achieving Indian curtailment of fissile material. While the US encourages other parties of the NPT to follow suit in this direction, as a test of Indian compliance with the agreement, the US also expects India to work towards negotiating a FMCT. Since the deals’ enactment, Indian officials have repeatedly asserted that; “there is no commitment at all to cease production of fissile material ahead of conclusion of [such a] multilateral FMCT.” Similarly, observers of the deal suggest that India should not cap its nuclear weapons program, as it will undermine India’s ability to build up its nuclear stockpile which would “threaten to place New Delhi at a disadvantage vis-à-vis Beijing, a situation that could not only undermine Indian security but also US interests in Asia.\textsuperscript{61}"

Pakistani officials cite their concern about India’s recently acquired ability to

\textsuperscript{59} Please see http://www.stimson.org/images/uploads/research-pdfs/AdilSultan.pdf
\textsuperscript{60} Please see http://www.thehindu.com/news/article82434.ece?homepage=true
expand its nuclear arsenal as a reason for refusing to support negotiations in the CD.\textsuperscript{62} The CD adopted a working group that was charged with negotiating a FMCT on the bases of the 1995 “Shannon Mandate.”\textsuperscript{63} Although Pakistan supported the work plan in 2009, it did not support the adoption of a draft program of work for 2010.\textsuperscript{64} On 18 February 2010, Ambassador Zamir Alram announced that Pakistan had originally supported the 2009 CD program of work because it believed that the Obama administration would likely reverse US policy on nuclear cooperation with India.\textsuperscript{65} Further evidence of Pakistan’s concern with India’s nuclear status stems from their goals with the FMCT. (Further information on this topic will be discussed in the negative strategic consequences section)

6. Improving Nuclear Arsenal: India commits to strengthening the security of its nuclear arsenals. U.S. companies will be allowed to build nuclear reactors in India and provide nuclear fuel for its civilian energy program.

In return for India’s concurrence on terms of the deal, India would be allowed to buy dual-use technology such as material and equipment from the United States and from other nuclear proficient countries like Russia, Canada, and Europe that could be used to enrich uranium, potentially creating the material for nuclear bomb.\textsuperscript{66} The 45-nation Nuclear Supplier Group (NSG), which is concerned with reducing

\textsuperscript{62} For more information about the treaty, see CRS Report RL33865, Arms Control and Nonproliferation: A Catalog of Treaties and Agreements, by Amy F. Woolf, Mary Beth Nikitin, and Paul K. Kerr.

\textsuperscript{63} On 25 January 1994, the CD appointed a Special Coordinator, Ambassador Gerald Shannon of Canada, to investigate the views of member states on the most effective way to negotiate a fissile materials treaty, which met the requests of the UN General Assembly. The resulting report, CD/1229, came to be known as the “Shannon Mandate” and proposed that an ad hoc committee be convened to pursue negotiations; Available at http://www.reachingcriticalwill.org/legal/fmct.html

\textsuperscript{64} Draft Decision for the Establishment of a Programme of Work for the 2010 Session, Conference on Disarmament, CD/1889, July 6, 2010. Also see Statement by Ambassador Zamir Akram, Permanent Representative of Pakistan to the Conference on Disarmament, August 31, 2010.

\textsuperscript{65} http://www.fas.org/sgp/crs/nuke/RL34248.pdf

\textsuperscript{66} Ibid
nuclear proliferation by controlling the export and re-transfer of materials that may be intended for a nuclear weapon or for its development, is also responsible for improving safeguards and protection on existing nuclear materials and technology. On August 1, 2008, the IAEA approved the safeguards agreement with India after which the US relied upon the NSG to grant a waiver to India to commence civilian nuclear trade. The NSG granted the waiver to India on September 6, 2008 allowing it to access civilian nuclear technology and fuel from other countries. Now that India has succeeded in obtaining the NSG waiver, it can import the uranium it needs for its nuclear power plants and if it desires, it can produce all the weapons it wants.

Although New Delhi promised to employ the nuclear materials exclusively for peaceful purposes, there is no law preventing it from using them for its nuclear weapons. In fact, because of this waiver, a new precedent and loophole was established which, makes India the only known country with nuclear weapons, which is not a party to the NPT, but is still allowed to achieve nuclear commerce with the rest of the world. 67 This may explain why Pakistan appears to be pressing for a similar exemption; this is evidenced by its wish to be granted a similar deal. Since the waiver, it has become even more apparent that the criteria within the 123 Agreement for the transfer of uranium-enrichment and plutonium-reprocessing technologies are not clear. 68 India insists that the NSG waiver means that all restrictions are off now. However, there remains great fear among the international community that technology supplied to India for making civilian fuel could also be diverted and used to produce a bomb.

67 For more information on the Nuclear Supplier Group waiver please see http://AFP.google.com/article/ALeqM5geN2RWjoN4o7hPibc7rhkxyxM7fzg
Prior to 123 Agreement, India was restrained by various technology controls and also contained by regimes like the NSG that prohibit it from obtaining high technology goods to accelerate its economic growth.\textsuperscript{69} The decision by the NSG to lift the ban on India has also cleared the way for other countries to make nuclear fuel and technology sales to India for its nuclear reactors.\textsuperscript{70} In July 2009, New Delhi selected two sites for U.S. companies to build nuclear reactors in India, but a nuclear liability law passed by the Indian parliament in August 2010 is causing a rift with U.S. nuclear suppliers.\textsuperscript{71}

\textbf{SUMMARY OF FINDINGS:}

The US-Indo nuclear cooperation agreement was contentious and underwent several major stages and changes before it reached where it is today. These stages consist of the Indian Nuclear Separation Plan (March 2006), the Hyde Act (December 2006), the 123 Agreement (August 2007), India-IAEA safeguards agreement (August 2008), and as noted above in the previous section, ultimately a waiver by the NSG (September 2008). The 123 Agreement provides the operational basis for the Indo-US nuclear deal and laid the foundation for the eventual law that allowed US companies to commence nuclear trade with India. Although problematic, uncovering the extent to which the overall terms of the agreement have been met is necessary, as there have been differences of opinion with regards to interpretation of the terms of reference and their respective understanding.

\textsuperscript{69} Chari, P. R, Indo-US Nuclear Deal
\textsuperscript{70} Ibid
\textsuperscript{71} Bajoria, Jayshree; Critics of the law believe India's proposal to seek legal redress against nuclear suppliers is a sharp deviation from the international liability regime which holds nuclear operators solely responsible in case of an accident. India would also like the United States to relax some of its restrictions on technology transfer to India.
Inconsistencies with regards to the above-stated agreements and arrangements, and specifically arrangements relating to India’s propensity to conduct nuclear tests, fuel assurances, development of strategic fuel reserves, and transfer of technology are still misunderstood and being debated.\(^2\) Political statements by both the parties and by Pakistan-- as a result of the US-Indo nuclear cooperation deal-- is instrumental in giving insight into the way the US-Indo nuclear cooperation deal is likely to be implemented in effect and one way which has allowed us to determine how the negative effects of the deal outweighed the gains.

The Obama Administration has reaffirmed President Bush’s policy regarding civil nuclear cooperation with India. Evidence of his administration’s support is found within the 8 November 2010, White House fact sheet, where the US avowed to “support India’s full membership” in the NSG, as well as other multilateral export control regimes. Notwithstanding the US governments’ support of the deal, there are still issues with the NPT. The final document of the 2010 NPT Review Conference urged all states-parties “to ensure that their nuclear-related exports...are in full conformity” with Article III of the NPT, which obliges non-nuclear-weapon states to accept full-scope safeguards on all nuclear material for the purpose of “preventing diversion of nuclear energy from peaceful uses to nuclear weapons or other nuclear explosive devices.”\(^3\) At present, India possesses nuclear weapons while remaining outside the NPT and lacks full-scope safeguards on all of its nuclear facilities. Despite this ambiguity, other countries have been cooperating with New Delhi to increase their nuclear cooperation.


\(^3\) Please see <http://www.fas.org/sgp/crs/nuke/RL33016.pdf>.
Since the NSG provision of exemption, which allowed India to conduct nuclear trade with the US, India has been concluding numerous nuclear cooperation agreements with foreign suppliers. Unlike their foreign counterparts, US companies have yet to begin nuclear trade in India because India has not resolved issues regarding its policies on liability for nuclear reactor operators and suppliers. Even though India designated two construction sites for US companies to build nuclear reactors in July 2009, the adoption of a new Indian law is causing a rift with US nuclear suppliers.74

According to some US observers, the new nuclear liability legislation, which was adopted in August of 2010, is inconsistent with the Convention on Supplementary Compensation for Nuclear Damage, (CSC). India signed the CSC on 27 October 2010 as a means to resolve US concern regarding its’ policies on liability for nuclear reactor operators and suppliers. Nonetheless, the CSC has not come into fruition. Critics of the law argue India’s proposal to seek legal redress against nuclear suppliers is a sharp deviation from the international liability regime, which holds nuclear operators solely responsible in case of an accident.75

Although Under Secretary of State William Burns described New Delhi’s signing of the CSC as a “very positive step” during a 27 October 2010 press briefing, he also indicated that India would need to work harder to address U.S. concerns regarding India’s liability policies.76 On a positive note, although India refuses to change its original plans to massively scale up its nuclear weapons arsenal, following the crisis at Fukushima

75 Ibid
76 Please see <http://www.fas.org/sgp/crs/nuke/RL33016.pdf>; The US and India are also discussing necessary monitoring arrangements for U.S. nuclear exports.
Daiichi nuclear power complex in Japan, it may consider implementing “additional safeguards” to plants to prevent catastrophe.  

Now, three years later, in evaluating the status of both parties compliance with the terms of the deal, whether the terms of the deal have been kept, and how the agreement has affected nuclear proliferation and the political dynamics in South Asia, the above reflects that while it has deepened the relationship between the US and India, it has also frustrated efforts to put a cap on nuclear proliferation. This is all because the deal itself lacks sufficient safeguards to prevent New Delhi from continuing to produce nuclear weapons, which has intensified tensions between Pakistan and India and will likely destabilize the South Asian sub-continent if India continues to proliferate.

The US-Indo cooperation agreement is an unprecedented deal for India, and although New Delhi is making headway with regards to some of the terms of the deal, such as identifying at least 14 out of the 22 nuclear facilities for IAEA safeguards and refraining from transfers of enrichment and reprocessing technology, India still is not a NPT signatory, therefore it is still able to proliferate and make nuclear weapons at its disposal. The most sensitive terms of the deal, such as declaring a unilateral moratorium on nuclear testing and clearly understanding the ramifications of doing so, conducting serious negotiations for a FMCT, and securing all of its nuclear materials and technology through comprehensive export control regulations -- are not strictly adhered to by India, and since the deal lacks sufficient safeguards and conditions to ensure these terms are

77 Please See <http://online.wsj.com/article/SB10001424052748704662604576201942967729076.html>. India has 20 nuclear power reactors with a capacity of 4,780 megawatts, which are operated by state-run Nuclear Power Corp. of India Ltd. as the country doesn't let private sector companies operate nuclear plants. India aims to expand its nuclear power generating capacity to 63,000 megawatts by 2032
conditional upon being allowed to conduct nuclear commerce, there are still issues with India’s overall compliance.

The following two sections discuss my overall strategic assessment to date, which suggests that the critics of the deal were right. While the US-Indo nuclear deal has bolstered a strategic partnership and stronger ties between the US and India, it has also probably contributed to a significant increase in Pakistan’s nuclear stockpile, which now surpasses India’s. The deal has also frustrated efforts to thwart increased production of fissile material and has provoked an unprecedented arms race in the South Asian subcontinent.

POSITIVE STRATEGIC CONSEQUENCES:

The US-Indo civilian nuclear cooperation deal is a welcome change in US-Indo relations. The new strategic partnership is mutually beneficial to both countries and also to NSG members. As briefly mentioned, the deal also focuses on other issues like economic prosperity, closer military and strategic ties, intelligence sharing, and cooperating on fighting terrorism. If the nuclear deal is successfully implemented, it will benefit both the US and India, and also the countries of the NSG that engage in nuclear trade with India. So, in addition to economic gains, the US will also make strategic gains. Bare in mind, right after congress approved the deal, India signed a nuclear cooperation deal with France, Russia, and China, which is why it has been begun nuclear trade with them. Even China, an aspiring hegemon in the region, appears to be

willing to cooperate with India as well.\textsuperscript{79} Furthermore, India is one of the biggest buying of defense equipment from the US Department of Defenses’ and also has a thriving requirement for the purchase of civilian aircrafts.\textsuperscript{80} On a geopolitical front, India has a counterbalancing presence against China in Asia. Recognizing these influences and understanding the growing energy market in India, the US decided to engage rather than isolate India.

The strategic partnership between both countries ended an era of nuclear isolation for India and provided it with a new energy source. Given the size of the Indian market, the deal and strategic partnership as a result, affords the US a great investment deal. In addition to creating new jobs for Americans, the deal will bring in revenue for the United States economy. Provided that India acquiesces to the terms of the deal, such as India placing at least 14 out of the 22 nuclear reactors under IAEA safeguards, and agreeing to separate its civilian and military reactors, US companies are predisposed to achieve economic prosperity such as receiving some of the pending multibillion-dollar reactor building contracts.

With regards to the possible US benefits from the nuclear deal with India, Jeffrey T. Bergner, assistant secretary of legislative affairs, affirmed that if US vendors win even two reactors, it could add 3000-5000 direct jobs and 10,000-15,000 indirect jobs in America for US citizens.\textsuperscript{81} He also explained how with this formal agreement, the US has been able to achieve some transparency of India’s nuclear establishment, which

\textsuperscript{79} Ibid
\textsuperscript{81} Ibid
reduces the risk of nuclear accidents. According to Bergner such transparency also allows the US to avoid another AQ Khan disaster whereby the illicit global trade of fissile materials to rogue states occurred for years under Pakistan’s watch. Provided that India strictly adheres to the terms of the deal, which binds New Delhi to IAEA civilian safeguards, the US will be provided with only partial transparency of India’s nuclear arsenal, but even so, with the many loopholes in the agreement, the US will not be privy to India’s true motivations and intentions.

Another positive strategic consequence of the deal stems from two US goals that Ashley Tellis began to explain, but failed to completely develop. He stated that while the twin policy goals of the US—hedging against China and nonproliferation—may seem incompatible, there is a need for the US to treat different countries differently, based on the behavior of each one. Pakistan was already a proliferation risk as evidenced by AQ Khan, thus a strategic partnership with India as opposed to Pakistan, for instance, was most appropriate because the US could achieve both goals in containing the rise of China, and also strengthening nonproliferation efforts by binding India to the rules and regulations of the IAEA. In other words engaging rather than isolating New Delhi—which could have potentially caused security risks—would alter the geopolitics of Asia to the US advantage. Thus, the deal would allow foreign policy makers to strategically weaken China by advancing and strengthening the US partnership with India. Forcing India to cap its nuclear weapons program would have likely strengthened China. The decision to offer the civilian nuclear deal to India was a rational decision because no

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82 Ibid
83 Ibid
84 Ibid
sanction or nonproliferation rhetoric would have been able to force India to refine its program by signing the NPT.

Finally and most importantly, it was likely the US-strategic partnership in 2008 that prevented an Indian mass-casualty—and nuclear attack on Pakistan following the Mumbai massacre. Today, the US-Indo partnership comes at a critical juncture for U.S. policymaking in the South Asian region as the US government continues to work on a new strategy for US forces in Afghanistan. In the backdrop of these negotiations, Islamabad’s behavior and position has become increasingly unstable in the face of internal and political militant opposition and relations between Pakistan and the United States have weakened. India can play a key role in assuaging tensions by exercising restraint and actively engaging its historic nuclear rival-- Pakistan. However, the possibility of another Mumbai-style attack—the 26 November 2008 Pakistan-militant backed attacks in Mumbai India, which killed 172 people-- looms as one of the major threats that could have damaging ripple effects through-out the region. Mumbai set Indo-Pakistani relations on a precarious edge that continues to this day. Bruce Riedel suspects that “we’ve probably reached the point of no return, where India’s patience next time isn’t going to ponder escalatory ladders – with regards to nuclear strikes against Pakistan – they’re going to find a way to strike back.”

The US government and Defense Secretary Robert Gates praised India’s restraint and act of statesmanship following the 2008 Mumbai attacks and remarked how both

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Pakistan and India were able to keep tensions at a “manageable level.” Indian policymakers demonstrated welcome restraint in the aftermath of the attacks, but unfortunately the attacks effectively derailed a tentative “composite dialogue” process begun in 2004 that has yet to be repaired despite negotiations between Prime Minister Singh and his Pakistani counterpart Yousaf Raza Gilani on the sidelines of a number of multilateral forums in 2009. Nonetheless, maintaining an effective and stronger strategic partnership with India will hopefully help to diffuse other future tensions in South Asia.

NEGATIVE STRATEGIC CONSEQUENCES:

As India continues to advance its nuclear capabilities, Pakistan also appears to be increasing its fissile stock and improving its delivery vehicles in order to hedge against possible increases in India’s nuclear stockpile. Islamabad is augmenting its current nuclear arsenal, and is building the capability to surge ahead in the production of nuclear-weapons material, putting it on a path to overtake Britain as the world’s fifth largest nuclear weapons power. The US-Indo nuclear cooperation deal appears to have exacerbated Pakistani blowback and the below evidence suggests it may have increased Islamabad’s appetite for a stronger nuclear arsenal, and in so doing provoked a nuclear arms race between India and Pakistan.

Four years ago, the Pakistani nuclear arsenal was estimated at 30 to 60 weapons.\textsuperscript{89} However, since the deal was announced in the 2005 and based on recent analysis done by US intelligence agencies, Pakistan has accelerated its production of plutonium and highly enriched uranium, and Islamabad may now have an arsenal of up to 110 weapons.\textsuperscript{90} This represents an increase of nearly 40 percent in two years, and makes Pakistan the fifth largest nuclear arsenal power behind the United States, Russia, France and China. In order to counter and deter India’s conventional military might, many of these nuclear weapons have been reduced in size so they could be mounted on ballistic missiles with ranges of more than 1,245 miles bringing many Indian cities within reach.\textsuperscript{91}

The deal has provoked Pakistani nuclear blowback, which is further evidenced by India and Pakistan’s nuclear arms race. In response to Voice of America reporter Iftikhar Hussain’s question regarding the size of Pakistan’s nuclear arsenal today, David Albright, the President of the Institute for Science and International Security and a leading analyst on the world's nuclear weapons stated:\textsuperscript{92}

"The numbers are hard to do. What we did is in a study, which we haven’t published yet, but we looked at how much material produced, and then looked at how many weapons you can make out of that, and then how many would be likely. And so, our number goes up to about 110 weapons now. It’s quite a large stock of actual weapons."

When questioned about the intentions of Pakistan’s security establishment’s as a result of this rapid increase in their arsenal, Mr. Albright highlighted Pakistan’s primary concern,
which is to thwart any impending or perceived threat of attack from India. Specifically,

Mr. Albright noted:

"I think one -objective-- is that they want to keep up with India. I think they also want to
increase their ability to make plutonium, which is a nuclear explosive material made in
reactors… So they want the plutonium to make a weapon that can be more dangerous in
the nuclear arms race that it has with India.

Another part of this is that Pakistan simply wants to increase the number of its nuclear
weapons. So, in that sense India and Pakistan are in kind of a pointless nuclear arms race,
where they each perceive the others increasing their nuclear arsenals, making it more
deadly, and so each feels compelled to move forward. But it’s a logic that really needs to
be broken. Because it’s dangerous, it can increase the chance of nuclear war. It also can
lead to much larger stocks of nuclear explosive material like plutonium and highly
enriched uranium which can leak out and get into the hands of terrorists. And that could
happen in Pakistan, it could also happen in India"

Finally, experts note the threat of nuclear terrorism in Pakistan is precarious
because of the arms race ensuing between Pakistan and India. According to a new study
conducted by Harvard University’s Belfer Center for Science and International Affairs,
titled “Securing the Bomb 2010,” Pakistan’s stockpile “faces greater threat from Islamic
extremists seeking nuclear weapons than any other stockpile on earth.”93 The Institute
for Science and International Security has reported that Pakistan's second nuclear reactor,
built to produce plutonium for weapons, shows signs of starting operations, and a third is
also under construction. The arms race is a manifestation of Pakistani blowback as a
result of the US-Indo civil nuclear cooperation deal.

If the US civil nuclear cooperation deal is not implemented carefully because of its
many loopholes, India may be in a position to augment its fissile stocks and improve its
nuclear weapons capabilities; augmenting its weapons capabilities and improving its

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93 Borger, Julian. "Pakistan Nuclear Weapons at Risk of Theft by Terrorists, US Study Warns | World
News | The Guardian." Latest News, Comment and Reviews from the Guardian | Guardian.co.uk. 12
weapons-security-fears>. 
defense structure has ultimately resulted in a nuclear arms race between Pakistan and India. If the deal is implemented without checking India’s plans and intentions, an arms race may ensue involving not only Pakistan, but also India and China, thus destabilizing the entire region.

As mentioned above, Pakistan has been consistently building-up its nuclear inventory and the 2005 agreement happened to increase that proclivity, thus an arms race is already brewing. Pakistan perceives India’s strategic partnership with the US as a direct threat against its capabilities because the deal has the potential to allow India to improve its nuclear weapons capability. Although there are benefits to making India a regional military power, such as leveraging New Delhi’s support to achieve US objectives in South Asia, doing so, may also inadvertently affect the security interests of other countries in the region.

It will be crucial for the United States, five years since the deal has been announced, to prepare for significant changes in the balance of power arrangement among various parties involved. For instance, US ties with India could force major parties involved to reconsider their security interests in the face of a growing and powerful emerging Indo-US strategic partnership thus triggering transformation of regional alliance structures, where India is seen decisively shifting towards the United States and Pakistan being compelled to explore options such as China that could best serve its security interests.94 For instance, despite Japan’s crisis triggering global alarms about atomic safety, China has publicly stated that it remains committed to plans to expand the “Chashma” nuclear power plant in the Punjab region of Pakistan using 1970s

technology. China’s nuclear ties with long-standing partner Pakistan have triggered unease in Washington, Delhi and other capitals worried about Pakistan’s history of spreading nuclear weapons technology, its domestic instability, and the potential holes created in international non-proliferation rules.  

The US-Indo civil nuclear cooperation deal enables India to make quantitative and qualitative improvement in its nuclear program. Although assurances of uninterrupted supply of fuel have been established in the agreement for civilian uses, it has indirect consequences on deterrence stability in the region. The assurance for perpetual nuclear fuel supply from the US would free up India’s indigenous uranium supply to be used for making -- if it desired -- a number of nuclear weapons. As stated above, India has agreed to designate 14 nuclear reactors, which would come under IAEA safeguards, as civilian to ensure nuclear fuel at these sites is not used for weapons. On the other hand, eight other nuclear reactors and an unlimited number of future reactors post 2008 would continue to produce fissile material for its nuclear weapons program and other military uses and would allow a major rapid expansion in India’s current stockpile free of international control.

Evidence supporting this assessment is found in PM Singh “Suo Moto” address to the Indian Parliament on 7 March 2006;

“there will be no capping of our strategic program, and the separation plan ensures adequacy of fissile material and other inputs to meet the current and future requirements of our strategic program, based on our assessment of the threat scenarios. No constraint has been placed on our right to construct new facilities for strategic purposes.”

Additionally, while commenting on the draft of the 123 Agreement PM Singh also said:

“There is nothing in the agreement that would tie the hands of future government or legally constrain its options to protect India’s security and defense needs. The agreement would not hinder or otherwise interfere with India’s nuclear activities, including our military facilities.” 98

This was further emphasized when a former senior Indian intelligence official reiterated:

“The assurance of nuclear fuel supply from the US and the NSG would free India’s existing capacity to produce highly enriched uranium and plutonium for its nuclear weapons program... Under the deal, India shall... have the capability to produce 50 warheads a year.” 99

Finally, the Indian demand for reprocessing spent fuel will also be possible as it the provision for reprocessing was omitted from the overarching 123 Agreement. India will be able to reprocess the spent fuel from the imported nuclear reactors and could then convert it into fuel for its fast breeder reactors, which would not come under the IAEA safeguards. Therefore, the nuclear deal would contribute to fuel for the existing eight and the number of planned fast breeder reactors. 100

Critics of the deal appear to be right. Despite the global partnership with India, the US-Indo agreement is full of loopholes that, if unchecked, could advance India’s weapons capability thereby heightening Pakistan’s threat perception of India vis-à-vis its’ defense system. The security dilemma between the two countries also encourages animosity and low-level conflict, which could one day escalate to a nuclear war if

intentions are misunderstood. Undermining the 123 Agreements’ 2 March Separation Plan, a major provision of the deal, is a statement made by David Albright. In a testimony before the US House Committee on 26 October 2005, Albright stated: “India’s extensive military and civil nuclear programs are often connected, sharing personnel and infrastructure. In addition, some facilities currently have both a military and civilian purpose.” Critics believe this is evidence of India’s major global player aspirations, allowing it to reprocess spent fuel in un-safeguarded nuclear reactors for military purposes. If this holds true, this would explain Pakistan’s nuclear aspiring ambitions.

Further evidence of the deal undermining the NPT stems from Pakistan’s concern over the FMCT. As discussed above, one of the overall terms of the nuclear cooperation deal required India’s sincere effort to conduct negotiations for a consensus on a FMCT, however, since the implementation of the deal, there have been no serious negotiations in sight. Nonetheless, Pakistani officials cite their concern about India’s recently acquired ability to expand its nuclear arsenal as a reason for refusing to support negotiations in the CD.

Although Pakistan supported the CD working group that was established in 2009, it did not support the adoption of a draft program of work for 2010. On 18 February 2010, Ambassador Zamir Alram announced that Pakistan had originally supported the 2009 CD program of work because it believed that the Obama administration would likely reverse US policy on nuclear cooperation with India as the deal, according to

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102 For more information about the treaty, see CRS Report RL33865, Arms Control and Nonproliferation: A Catalog of Treaties and Agreements, by Amy F. Woolf, Mary Beth Nikitin, and Paul K. Kerr.
Pakistan, was biased.\textsuperscript{104} Pakistani officials contend that not only should the FMCT prohibit the production of new fissile material, but it should also require states with fissile material to reduce their stockpiles.\textsuperscript{105} A treaty without such a requirement, according to Pakistan, will put the country at a disadvantage with respect to India because Pakistan’s views New Delhi’s larger fissile material stocks and production capability as a direct threat. As a result, since the US wont provide Pakistan with a similar deal on nuclear technology and trade, Pakistan has blocked discussions at the international Conference on Disarmament of a pact that would prohibit member nations from producing fissile materials for nuclear weapons.\textsuperscript{106} India and Pakistan’s turbulent past and chaotic relationship demonstrates how fragile and sensitive deterrence stability is in the region. India’s aspirations for nuclear power status, has undermined deterrence.

\textbf{POLICY PRESCRIPTION:}

The ongoing contentious debate on the implications of the US-Indo nuclear cooperation deal will continue if proliferation concerns of the international community are not clearly addressed. The nuclear cooperation deal contains many loopholes, some of which if remained unchecked, could destabilize the South Asian subcontinent because they allow for India to increase the quality and quantity of its nuclear weapons arsenal. The deal has also highlighted the need to integrate Pakistan, another non-party to the NPT, into the mainstream non-proliferation regime to ensure that it does not export nuclear technology to other non-NPT parties. Striking a similar deal with Pakistan would

\footnotesize\textsuperscript{104} http://www.fas.org/sgp/crs/nuke/RL34248.pdf
\textsuperscript{105} IBID

42
benefit both Pakistan and the US from peaceful uses of nuclear technology. Such a relationship, would also allow the US to (1) ameliorate its already weakened relations with a bitter Pakistan; (2) resolve issues such as terrorism; (3) also allow the US to leverage and support the bilateral process between India and Pakistan, allowing them to establish a peaceful coexistence.

If the US-Indo nuclear cooperation deal provoked Pakistan’s nuclear build-up, the U.S. may have to re-evaluate its relationship with rogue states in the future. Specifically, it may want to consider striking a nuclear trade deal with Pakistan for a few reasons. The first reason would be to help stabilize the relationship between Pakistan and India; this would help the two nations produce a stable nuclear détente. Additionally, such a deal would allow the United States and Pakistan to help strengthen their collaboration on resolving the war in the Pakistan-Afghanistan region.

The nuclear cooperation deal required the US to amend its own domestic laws that was created as a result of India’s previous misuse of civil nuclear technology when it exploded a nuclear bomb in 1974. Moreover, India-specific exceptions, provided by the NSG at the behest of the US, were established just so India can benefit from civil nuclear technology. One of the reasons the US likely offered this deal to India was aimed at building this strategic partnership.

The framework of this new bilateral partnership provides the US with the opportunity to demand a degree of reciprocity and responsibility from India especially on issues that impinge upon US national security, such as terrorism.\textsuperscript{107} If the agreement is not aimed at enhancing India’s nuclear weapons capability then US must insist on

commitments that could restrict India from making any qualitative and quantitative improvements in its nuclear arsenal.\textsuperscript{108}

\textsuperscript{108} Ibid
Appendix 109

Power Reactors in India
India (Note: military reactors will not be open for safeguards)

<table>
<thead>
<tr>
<th>Power Reactor</th>
<th>Type</th>
<th>Gross Power Mwe</th>
<th>Start-up Date</th>
<th>Safeguards</th>
<th>Open for Safeguards</th>
</tr>
</thead>
<tbody>
<tr>
<td>In Operation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaiga-1</td>
<td>PHWR</td>
<td>220</td>
<td>16-Nov-00</td>
<td>Unsafeguarded</td>
<td>Military</td>
</tr>
<tr>
<td>Kaiga-2</td>
<td>PHWR</td>
<td>220</td>
<td>16-Mar-00</td>
<td>Unsafeguarded</td>
<td>Military</td>
</tr>
<tr>
<td>Kakrapar-1</td>
<td>PHWR</td>
<td>220</td>
<td>6-May-93</td>
<td>Unsafeguarded</td>
<td></td>
</tr>
<tr>
<td>Kakrapar-2</td>
<td>PHWR</td>
<td>220</td>
<td>1-Sep-95</td>
<td>Unsafeguarded</td>
<td></td>
</tr>
<tr>
<td>Madras-1</td>
<td>PHWR</td>
<td>170</td>
<td>27-Jan-84</td>
<td>Unsafeguarded</td>
<td>Military</td>
</tr>
<tr>
<td>Madras-2</td>
<td>PHWR</td>
<td>220</td>
<td>21-Mar-86</td>
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<td>Military</td>
</tr>
<tr>
<td>Narora-1</td>
<td>PHWR</td>
<td>220</td>
<td>1-Jan-91</td>
<td>Unsafeguarded</td>
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</tr>
<tr>
<td>Narora-2</td>
<td>PHWR</td>
<td>220</td>
<td>1-Jul-92</td>
<td>Unsafeguarded</td>
<td></td>
</tr>
<tr>
<td>Rajasthan-1</td>
<td>PHWR</td>
<td>100</td>
<td>16-Dec-73</td>
<td>Safeguarded</td>
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</tr>
<tr>
<td>Rajasthan-2</td>
<td>PHWR</td>
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<td>1-Apr-81</td>
<td>Safeguarded</td>
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</tr>
<tr>
<td>Rajasthan-3</td>
<td>PHWR</td>
<td>220</td>
<td>1-Jun-00</td>
<td>Unsafeguarded</td>
<td></td>
</tr>
<tr>
<td>Rajasthan-4</td>
<td>PHWR</td>
<td>220</td>
<td>23-Dec-00</td>
<td>Unsafeguarded</td>
<td></td>
</tr>
<tr>
<td>Tarapur-1</td>
<td>BWR</td>
<td>160</td>
<td>28-Oct-69</td>
<td>Safeguarded</td>
<td></td>
</tr>
<tr>
<td>Tarapur-2</td>
<td>BWR</td>
<td>160</td>
<td>28-Oct-69</td>
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<tr>
<td>Tarapur-4</td>
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<td>540</td>
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<tr>
<td>Under Construction</td>
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<tr>
<td>Rajasthan-5</td>
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<td>2007 planned</td>
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<tr>
<td>Rajasthan-6</td>
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<tr>
<td>Tarapur-3</td>
<td>PHWR</td>
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<td>Military</td>
</tr>
<tr>
<td>PFBR</td>
<td>Fast Breeder</td>
<td>500</td>
<td>2010 planned</td>
<td>Unsafeguarded</td>
<td>Military</td>
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109 This Appendix is reflected in Zia Mian’s Fissile Materials In South Asia: The implications of the U.S.-India Nuclear Deal.
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