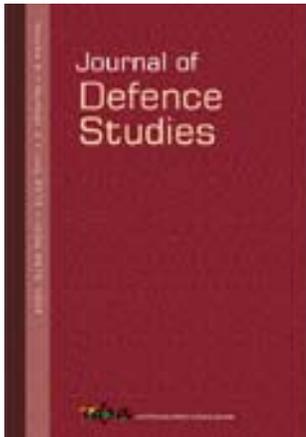


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## The Maturing of Russia-India Defence Relations

*Richard Weitz\**

*Defence cooperation between Russia and India remains strong because of shared security concerns, geopolitical imperatives, and economic benefits. Both countries fear radical Islamic terrorism, share concerns about regional instability in Central Asia, and are uneasy with US military hegemony and the rise of China. Powerful interest groups in both countries also have a common interest in sustaining Russian arms sales to India. Russia's defence industry needs foreign sales to achieve economies of scale and sustain a manufacturing base that remains excessive for simply meeting Russian domestic demand. India has an enormous legacy of Soviet-based weapons that it needs to modernize, upgrade, and replace. In addition, Russian arms supplies continue to offer a good price-performance trade-off. But recurring problems with some Indian purchases along with along with India's changing geopolitical orientation could eventually displace Russia's currently pre-eminent status in India's foreign military purchases.*

Despite the end of the Cold War, Russian-Indian defence cooperation remains strong because of geopolitical imperatives, shared security concerns, and mutual economic benefits. Both countries fear radical Islamic terrorism, share concerns about regional instability in Central Asia, and are uneasy with US military hegemony and the rise of China. Powerful interest groups in both countries also have a common interest

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in sustaining Russian arms sales to India. Russia's defence industry needs foreign sales to achieve economies of scale in some production runs as well as to sustain a manufacturing base that remains excessive for simply meeting Russian domestic demand. India has an enormous legacy of Soviet made weapons that it needs to modernize, upgrade, and replace. In addition, Russian arms supplies continue to offer a good price-performance trade-off. But recurring problems with some Indian purchases along with India's changing geopolitical orientation closer to the West, especially the United States, could eventually lead to Russia's currently pre-eminent status in India's foreign military purchases falling to that of first among equals. Against this general framework, this article seeks to analyse the changing Russian-Indian arms sales relationship in some detail.

#### HISTORY

From New Delhi's perspective, the Soviet Union's disintegration in the early 1990s threatened what had been a very beneficial defence relationship with Moscow. The new Russian President, Boris Yeltsin, had a westward focus and downplayed Russia-Indian ties. Yeltsin and his Foreign Minister, Andrey Kozyrev, fervently hoped to become the recipients of large-scale economic aid packages from advanced Western countries. These aspirations reflected their desire to ease the difficult transition from a socialist planned economy to a free market economy. The Yeltsin policy did not represent an explicit repudiation of the previous Moscow-New Delhi alignment, but it did treat these ties as something of an afterthought.<sup>1</sup>

The Yeltsin Government took actions that the Indians could easily consider as detrimental to their interests. For example, Moscow tried to improve ties with Islamabad, and even pondered selling weapons to Pakistan, taking advantage of the US arms embargo then in place. Russian officials also welcomed warmer relations with China, and the economic and strategic benefits from selling massive quantities of excess Soviet arms to the People's Liberation Army (PLA). The 1971 Soviet-India Treaty was replaced in 1993 with the new Treaty of Friendship and Cooperation, which dropped clauses that were implicitly directed against a perceived threat from the US and China. The Yeltsin Administration also yielded to US pressure on non-proliferation issues and curtailed its space launch cooperation with India, which US analysts feared was

contributing to India's ballistic missile capabilities. For instance, Russia delayed transferring cryogenic (low temperature) rocket engines and related technologies to India, which the USSR had promised to assist India's Outer Space programme. The Russian Government also urged India to join the Nuclear Non-Proliferation Treaty (NPT) and, in March 1992, applied 'full-scope safeguards' to future nuclear supply agreements with India, which constrained the latter's use of its civilian nuclear power programme to produce fissile material for nuclear weapons.

Those Russians who favoured continuing the traditional 'special' relationship with India as a means to balance American hegemony included Communists, Russian nationalists, and analysts and policy-makers adhering to a 'Eurasian' outlook. They continued to exert considerable influence on Russian foreign policy in the 1990s since Yeltsin felt pressured to adopt some of their policy preferences in order to not appear as a Western lackey. Their weight increased substantially after Yeltsin felt compelled to dismiss the pro-West Kozyrev and replace him with Yevgeni Primakov, an influential Soviet-era policy analyst who advocated a Eurasian policy. Primakov served as Foreign Minister from January 1996 until September 1998, and then was promoted to Prime Minister until 12 May 1999. Primakov sought to rebalance Russian foreign policy by focusing more on developing ties with the emerging powers of Eurasia, especially by establishing a 'strategic triangle' among China, India, and Russia. One source binding these three states together was shared concerns about Islamic terrorism. Russia faced a secessionist movement in Chechnya, a predominately Muslim territory within Russia, Indians felt threatened by Islamic militants in Kashmir, while the Chinese were alarmed by Uighur nationalism in Xinjiang. Russia joined with India and China in defending the primacy of the principles of state sovereignty and non-intervention by foreign actors in their respective separatist regions of Chechnya, Kashmir, and Taiwan.

Although these three governments favoured multipolarity in principle, Primakov's attempted geopolitical re-orientation encountered major barriers.<sup>2</sup> India and China proved reluctant to support an explicitly anti-American agenda, not wishing to exchange their partnership with Washington for alliance ties with Moscow. At the time, the Russian Army was still recovering from the disintegration of the Soviet Army while Russia's 1998 financial crisis led to the near collapse of the Russian economy. In addition, China and India were divided over various regional security issues, including their disputed borders and Beijing's ties with

New Delhi's main rival, Pakistan. They also emerged as energy competitors as China's need for imported energy surged in the following years.<sup>3</sup> As during the Soviet period, Moscow was again torn between sustaining its longstanding ties with India and seeking to improve ties with China. When India openly tested five nuclear weapons at its Pokhran test range in May 1998, the Defence Minister justified these tests as designed to enhance India's security against China. Russian officials declined to criticize India for these Pokhran-II tests. More importantly, Moscow did not impose sanctions as the United States did. In fact, in the months following Pokhran-II, the Russian Government signed an agreement to construct two Russian light-water nuclear reactors in India.<sup>4</sup> Nonetheless, Russia urged India to sign the NPT and offered to mediate India's disputes with Pakistan, a Chinese ally.<sup>5</sup>

Even so, Russian-Indian defence ties remained strong. Moscow and New Delhi signed a pair of comprehensive arms sales agreements in January 1993 and February 1996. By the end of Yeltsin's presidency, military-technological cooperation between the countries (mostly procurement of Russian weaponry by India) reached \$1.5 billion a year.<sup>6</sup> Russian-Indian economic ties continued to grow after Vladimir Putin became Russian President in 2000. Some Russians joked that the word 'PUTIN' is short for 'Planes, Uranium, Tanks, Infrastructure and Nuclear Power'.<sup>7</sup> These items do indeed comprise the main pillars of Russian-Indian commerce, but one should not exaggerate economic ties between Russia and India. Russian investment in India amounts to around only \$1 billion and occurs mostly through use of rupee-debt repayment funds.<sup>8</sup> Meanwhile, Indian investment in Russia amounts to only around \$4.5 billion, almost all in the energy sector.<sup>9</sup> Two-way trade amounted to only \$8 billion in 2010.<sup>10</sup> India and Russia recently set the goal of achieving \$20 billion in mutual trade by 2015.<sup>11</sup>

Foreign policy coordination between Russia and India has remained firm but limited. Putin, who served as Prime Minister from May 2008 until May 2012, made a well-received visit to India in 2010 that helped sustain bilateral ties even as the Washington was courting New Delhi.<sup>12</sup> The Russian Government has endorsed India's efforts to become a permanent member of the UN Security Council with full veto powers. In Putin's words, 'India is our candidate number one in terms of enlarging the geographical representation of the Security Council.'<sup>13</sup> But Russia has proved unable (or has simply not tried very hard) to overcome China's opposition to India's becoming a permanent member of the Security

Council or a full member of the Shanghai Cooperation Organization, where India is an observer country. Russian analysts have seen India as an important element in the multipolar world order that they hope to promote to balance the power of the United States and its European and Asian allies. Yet, just as Indian leaders have made clear their unwillingness to align with the United States against China, so are they determined to avoid siding with Moscow against Washington.<sup>14</sup> The revival of the Russian economy under Putin and the continued growth of the Chinese and Indian economies have renewed interest in cooperating together on economic issues through the new BRICS (Brazil-Russia-India-China-South Africa) bloc of emerging economic powers. But thus far, the BRICS have only achieved modest economic cooperation through joint declarations and summits, demonstrating little if any strategic coordination.<sup>15</sup>

Russian-Indian cooperation remains greatest in the defence sector. Russia has indeed sold India some weapons systems that it offers no other foreign clients. These sales and other defence cooperation have been institutionalized in regular meetings of the Russian-Indian Governmental Commission on Military Technical Cooperation, which meets annually at the level of Defence Ministers. Russia is the only country with which India has such an institutionalized military cooperation mechanism at such a high level.<sup>16</sup> The Commission, established in 2000, has two main working groups (on Military Technical Cooperation and Shipbuilding and on Aviation and Land Systems) and seven sub-groups. The Commission supervises implementation of the 10-year umbrella intergovernmental agreements on military and technical cooperation. The first agreement covered the 2001–10 period, while the second one, signed during Prime Minister Manmohan Singh's visit to Russia in December 2009, covers the 2011–20 period.<sup>17</sup> According to the head of Russia's state-run arms exporter, Rosoboronexport, which approves and administers almost all of Russia's major arms sales, Russia is currently participating in 20 tenders in India under this second agreement.<sup>18</sup>

#### **IMPORTANCE OF ARMS SALES**

According to Russian calculations, during the past four decades the total value of all Russian-Indian military-technical cooperation has exceeded \$35 billion.<sup>19</sup> Indeed, Russia's arms sales to India remain the most important element of their overall relationship. Bilateral defence ties

have recovered from the problem-filled 1990s, when the Indian military had difficulties receiving adequate maintenance, support, and spare parts for its previous Soviet-era weapons purchases. At the time, the Russian defence industry was coping with the aftermath of the collapse of the integrated and lavishly funded Soviet military industrial complex. Cash-strapped Russian firms demanded hard currency for arms transactions instead of the traditionally favourable soft terms offered by New Delhi during the Soviet period.<sup>20</sup>

Despite the problems that traumatized the Russian defence industry following the disintegration of the Soviet Union, Russia has remained the main source of most of these advanced weapons systems. For example, approximately half of the major surface combatants and combat submarines in service with the Indian Navy were constructed in Russia or the Soviet Union. Even many of the Indian-made ships are equipped with Russian-made weapons systems such as ship-to-ship and surface-to-air missiles, torpedoes, guns, and anti-submarine weapons.<sup>21</sup> The Indian Army has also purchased almost 2,000 T-72 tanks, and hundreds of BMP-1 and BMP-2 armoured vehicles from the Soviet Union. Furthermore, Russian companies receive revenue from servicing and upgrading India's primarily Soviet-made military hardware.

Overall, India still purchases most advanced military systems from foreign suppliers, especially Russian companies. Some two-thirds of India's defence procurement budget is spent on foreign-supplied weapons and services, making India the largest arms importer in the world.<sup>22</sup> Indian defence firms have found it difficult to transition from the development of successful prototypes to the serial production of major indigenous weapons systems such as submarines, tanks, or combat aircraft.<sup>23</sup> Meanwhile, Russia has sought to meet Indian demands that Russia transfer more defence technologies to India and, in line with Moscow's increased willingness to import weapons and co-produce them, engage with India in more joint research, development, and production of new military systems. 'Our main task is to switch from buying or selling weapons to jointly designing and producing them', Medvedev explained when he visited India in 2008. 'We have such plans in rocket building and aviation.'<sup>24</sup> Unlike the United States and other Western countries, Russia has declined to sell weapons to Pakistan in deference to Indian sensitivities.

Starting in the late 1990s, the Indian Government subsidized research and development of a unique 'Indian' version of the Sukhoi Su-30 (known as the Su-30MKI, where 'MKI' stands for 'Modernizirovannyi

(modern), Kommercheskiy (commercial), Indiski (Indian-produced)', specially designed for the Indian Air Force and one of the world's best air superiority fighters. Between 2002 and 2004, India received 32 twin-seated Su-30MKIs. The Indian defence community was sufficiently pleased with the purchase that it subsequently ordered an additional 40 Su-30MKIs and accepted a Russian proposal to upgrade 18 Su-30Ks Russia supplied earlier to the MKI standard. The Indian Government also bought a licence from Sukhoi to manufacture 140 additional Su-30MKI aircraft.<sup>25</sup> A more recent deal will allow Hindustan Aeronautics Limited (HAL) to modernize 42 of India's existing Su-30MKI fighters with new Russian-made radars, avionics, and BrahMos supersonic missiles. This \$2.3 billion project will begin in 2012. By the end of this decade, the Indian Air Force will possess around 280 Su-30MKI fighters.<sup>26</sup> All told, the Su-30 deals are the largest aggregate Russian warplane sale since the Soviet Union's dissolution.<sup>27</sup>

One of the most prominent Russian-era Indian defence deals occurred in 1998, when the two countries established the Russian-Indian joint venture BrahMos Aerospace to co-develop and produce supersonic tactical cruise missiles. The BrahMos missiles incorporate advanced Russian technologies, which Moscow has not made available to China or any other country, but are built in India.<sup>28</sup> The Indian armed forces intend to use variations of the missile, which could fly at speeds up to Mach 2.8 and has a range of up to 300 km, on several different weapons systems against a wide range of tactical targets. In June 2007, the Indian ground forces began deploying BrahMos-1 missiles on a Tatra truck chassis. So far, two battalions of this variant have been deployed in border regions for rapid attacks on radar stations, air defence sites, and airfields; the missile can dive steeply to hit targets in mountains.<sup>29</sup> BrahMos Aerospace is currently testing a naval variant, the BrahMos-2.<sup>30</sup> Air- and submarine-launched versions of the missile are currently under development; the first testing of the air-launched variant is scheduled for testing at the end of this year.<sup>31</sup> In August 2011, BrahMos Aerospace signed a Memorandum of Understanding with two Russian aviation institutions, Moscow Aviation Institute and NPO Mashinostroyeniya Corporation, to establish a centre of excellence for developing technologies for high-speed aircraft and missiles. An important goal is to develop a hypersonic version of the supersonic cruise missiles.<sup>32</sup>

The two governments have also reached other important arms deals in recent years. In 2004, the Indian Air Force ordered three Russian-

Israeli A-50EI Airborne Warning and Control System (AWACS) aircraft for \$1.1 billion that combined the Russian Il-76MD military transport plane with the Israeli-made Phalcon radar system. Delays in developing a domestically developed AWACS system has led the Air Force to prepare to order two additional A-50EI AWACS, which can detect targets as far as 400 km, in a new \$800 million contract.<sup>33</sup> In December 2007, the Indian Government ordered an additional 347 Russian-manufactured T-90S Main Battle Tanks, which are intended to match the US Abrams M2.<sup>34</sup> At the MAKS 2011 International Aviation and Space Salon, held at Zhukovsky airfield outside Moscow from August 16–21, 2011, India signed a contract to buy 80 Russian Mi-17 multi-role tactical transport helicopters, giving India around 200 of these helicopters in total.<sup>35</sup>

Russia and India have also established a joint venture, Multirole Transport Aircraft Ltd., to research and develop a Multi-Role Transport Aircraft (MTA) for both their air forces. HAL and Russia's United Aircraft Cooperation (UAC), a state-holding company of Russia's military and civilian aviation producers that includes the Sukhoi and MiG corporations, will both invest \$300 million to create a plane that can carry as much as 20 tonnes of cargo up to 2,500 km with speeds of up to 800 km. It will be equipped with a digital cockpit, digital electronic engine control, and a fly-by-wire control system.<sup>36</sup> HAL and UAC signed a contract at the end of May 2012 to manufacture 205 planes for both their air forces as well as for export.<sup>37</sup> They aim to produce their first all-weather medium transport prototype by 2017, with serial production to begin in 2019.<sup>38</sup> The Russian Air Force intends to buy as many as 100 of the new planes to replace its Il-214. The Indian Air Force expects to purchase at least 35 of the new aircraft. They will replace India's aging fleet of AN-32 planes, which Russia is upgrading under a separate contract worth almost \$400 million.<sup>39</sup> The joint venture also aims to sell some planes for export, though no potential buyers have been identified. More worrisome, some Russian analysts doubt the project is sufficiently feasible to ever produce large number of planes due to its high price and leisurely development pace, and the progress made by its major competitor, Brazilian Embraer KC-390. The problems that emerged during his joint effort include the parties' diverging military requirements, inadequate funding, and sorting out industrial participation.<sup>40</sup>

The large number of weapons Moscow has sold to New Delhi over the years has provided Russian defence companies with many opportunities to sell spare parts, maintain existing systems, and upgrade some weapons

in the future. Some of these deals have proven quite profitable. In 2005, Russia signed a \$250 million deal to upgrade the engines on the MiG-29 fighters in service with the Indian Air Force. The contract allowed HAL to manufacture, under license production, 120 RD-33 series 3 jet engines at its Koraput plant. This series 3 upgrade provides superior maneuverability and improved performance in close air dogfights.<sup>41</sup>

In March 2008, the MiG Corporation signed a \$1 billion contract with the Indian Defence Ministry to modernize the 60–70 MiG-29 fighters India purchased in the 1980s to extend their service lives by several decades. Russia will give the planes more advanced avionics, new multi-functional Zhuk-ME radars, a new weapon control system, and improved engines.<sup>42</sup> The agreement stipulates that MiG will establish depots, service centres, and training centres (including simulators) in India, whose value amounts to approximately one-third of the contract, because almost all the MiGs are to be modernized in India, with the contract completed by 2013.<sup>43</sup> In March 2010, India agreed to purchase an additional 29 MiG-29s for \$1.5 billion.<sup>44</sup>

#### PROBLEMATIC PARTNERSHIP

Even so, the Russian-Indian arms relationship has experienced recurring problems, especially Indian criticism regarding the inferior quality of some imported Russian weapons. During the 1990s, Indians complained about shoddy maintenance and insufficient spare parts for their Russian-built aircraft, including the Sukhoi interceptors.<sup>45</sup> More recently, in September 2007, the Indian Government suspended payments under a \$150 million contract, signed with the Ilyushin design bureau in 2001, to upgrade five Il-38SD anti-submarine patrol aircraft. Indian defence experts concluded from flight tests that the aircraft did not satisfy their technical standards.<sup>46</sup>

The most notorious bilateral defence snafu has involved the Russia-Indian deal to renovate the Soviet-era Admiral Gorshkov and transfer it to the Indian Navy. After the fall of the Soviet Union, this former Soviet aircraft carrier, built in 1978, was berthed at the Sevmash shipyard in northern Russia, while Russian officials debated what to do with the ship. The impoverished Russian Government did not have sufficient funds to repair and upgrade the vessel. In January 2004, the Indian Government negotiated a comprehensive contract with Russia's state-run arms exporter Rosoboronexport. Under its terms, the Indian Navy agreed to purchase the carrier along with a complement of warplanes for the ship for \$1.5

billion.<sup>47</sup> These include single-seat MiG-29K and two-seat MiG-29KUB fighters as well as Ka-27 Helix-A and Ka-31 Helix-B anti-submarine helicopters.<sup>48</sup> The carrier could also be equipped with Russian-Indian BrahMos missiles as well as other Russian, Indian, or third-party weapons systems.<sup>49</sup> In effect, the Indians received the hull of the 44,500-tonne ship almost for free (priced as scrap metal) in return for purchasing from Russia new planes and helicopters for the carrier and for funding the ship's repair and re-equipping at Sevmash, which was then thought to cost nearly \$1 billion.<sup>50</sup> The Russian Government committed to train the ship's Indian crew, provide logistics support, supply any new infrastructure required by the carrier's new home port, and deliver various technical documents about how to operate and maintain the vessel.<sup>51</sup>

As things turned out, the Sevmash shipyard could not meet the terms of the original contract, which stipulated delivery in August 2008.<sup>52</sup> Most Russian analysts soon concluded that the original terms were unrealistic in light of the difficulty of the task and the underfinancing of the Russian shipbuilding industry.<sup>53</sup> Another complication was that the Soviet Union had built its aircraft carriers in Ukraine. Russian defence firms lost access to these shipyards when the Soviet Union dissolved in 1991. After months of hard bargaining, Russia and India renegotiated the terms of the contract. When Putin visited New Delhi in March 2010, the two governments established the new price for the carrier project and its complement of warplanes estimated at about \$2.34 billion. The Russian Navy will conduct 18 months of sea trials with the carrier, with a mixed crew to allow Russians to teach Indians how to use the carrier before transferring the ship to the Indian Navy.<sup>54</sup> The Russians will train more than 1,400 Indian specialists in total.<sup>55</sup> The current delivery date is December 4, 2012, but this could slip further if the sea trials expose any problems.<sup>56</sup>

Although India has begun receiving some of the 45 MiG-29K/KUBs intended for the carrier, it is uncertain whether they all will all be transferred by then.<sup>57</sup> The Indian pilots are training to fly the MiG-29K by practicing take-offs and landings from Russia's Admiral Kuznetsov, a 'heavy aircraft carrying cruiser', lacking all the warplanes found on a regular aircraft carrier. Until a recent Russian Government purchase, the Indian Navy had been the only buyer of the naval variant of the MiG-29.<sup>58</sup> India has renamed the ship the INS Vikramaditya. It will replace India's British-made INS Viraat carrier, which is barely seaworthy having served in the Indian Navy for 50 years. Indians' decision to persevere with

the carrier purchase may have been due to sunk costs, but it might also have reflected a desire to sustain bilateral defence relations with Russia, which serves additional Indian interests.

Despite India's continuing interest in acquiring the carrier, Russian analysts fear that problems with the ship and other past arms deals will hurt Russia's ability to compete for new Indian Government defence orders. In July 2009, Medvedev described the Gorshkov affair as a 'very difficult experience' in the Russian-Indian relations. He warned, 'The ship must be finished. Otherwise there will be serious consequences.'<sup>59</sup> A few weeks later, the Indian Government's Comptroller and Auditor General concluded that India would have been better off buying an entirely new carrier rather than accepting Russia's 'gift' of a free ship.

India's military establishment has also expressed concerns about the quality and timely delivery of other Russian naval purchases. For example, they have objected to the lengthy time it has taken Russian shipbuilders to deliver some multi-role frigates and to upgrade the Indian Navy's fleet of Kilo class diesel submarines, originally purchased from Russia between 1986 and 2000. The Zvezdochka shipyard in Severodvinsk has upgraded four of the older submarines by overhauling their hull structures and modernizing their control, sonar, electronic warfare, and weapons system.<sup>60</sup> Indians also suffered delays in the scheduled delivery of three modified Krivak III class (known in India as Talwar class) guided missile frigates.<sup>61</sup> These are under construction at Russia's Yantar shipyard in fulfilment of a \$1.6 billion contract signed in 2006 with Rosoboronexport. The original schedule for the delivery of the three ships was April 2011, October 2011, and April 2012, but the dates slipped a year. It was not until April 2012 that India formally commissioned INS Teg.<sup>62</sup> The second frigate began sea trials at the end of the following month, while the third remains under construction.<sup>63</sup> Russian sources indicate that the reasons for the delays are caused by a shortage of skilled manpower, resulting in their being unable to work on all the ships simultaneously, as well as by delayed deliveries of Russian equipment to the shipyards.<sup>64</sup> Russia has already constructed three Talwar-class frigates for India under an earlier contract. India received these ships—the INS Talwar (Sword), INS Trishul (Trident), and INS Tabar (Axe)—during the 2003–04 period. They are armed with eight jointly-developed BrahMos supersonic cruise missiles rather than the solely Russian-made Klub cruise missiles on the original Talwar-class ships.<sup>65</sup>

The Project 971 Shchuka-B (NAT: Akula II) K-152 'Nerpa' nuclear-powered attack submarine that India is now leasing from Russia has proved equally problematic. Under the lease contract, India provided hundreds of millions of dollars to finish construction of the Nerpa at Amur Shipyard in return for 10 years' use of the ship and Russia's training of the Indian crew. The Nerpa was initially scheduled to join the Indian Navy as the INS Chakra in 2008, but production delays along with the accidental release of toxic Freon gas from the ship's automatic fire suppression system in November 2008, which killed 20 people and injured many more, delayed the transfer until 2010. The Chakra is unable to serve as strategic submarine capable of launching nuclear-armed ballistic missiles, but could help Indian sailors master advance submarine technologies and nuclear-powered vessels.<sup>66</sup>

India's has also has problems with the 1,000 T-90 main battle tanks that New Delhi purchased under license from Russia in 2001, after the indigenous 'Arjun' tank ran into production problems. At the time, India also bought 300 of the tanks outright, becoming the first export customer for the T-90s, which have been in service with the Russian army since the mid-1990s. The T-90 is equipped with a 125 mm smooth-bore gun, a 12.7 mm anti-aircraft machine gun, and a 7.62 mm co-axial machine gun with advanced sighting and automatic loader systems. India purchased another 300 already assembled tanks from Russia directly in 2008 after licensed production stalled due to technology transfer issues, which were supposedly resolved later that year.<sup>67</sup> India's Heavy Vehicle Factory in Avadi, Chennai, delivered its first 10 domestically manufactured T-90 'Bhishma' tanks to the Indian Armed Forces in August 2009.<sup>68</sup> Indian Minister of State for Defence, Pallam Raju, has said that India's indigenous manufacture of the T-90 tanks represented an 'important milestone' for India's attaining military self-sufficiency.<sup>69</sup> As of December 2011, the factory has manufactured only about 150 of the expected 1,000 T-90 tanks.<sup>70</sup> Indian sources cite Russian impediments in transferring the technology and the Russian-built assemblies needed to build the tanks.<sup>71</sup> Russian sources denied this claim and instead speculated that Indians were trying to shift blame away from the failures of some of the Indian sub-contractors to meet their contract obligations.<sup>72</sup>

At the 11th meeting of the India-Russia Inter-governmental Commission on Military Technical, co-chaired by Defence Ministers Serdyukov and A.K. Antony, the latter complained of delays in receiving export clearances for vital equipment needed to repair Russian weapons

systems India has already purchased. Antony also lamented the slow progress in designing and developing the MTA.<sup>73</sup> Perhaps due to Indian unease over all these difficulties, European and US firms have begun supplying some defence products and services to India that New Delhi had previously acquired from Russian suppliers.

Russian defence manufactures were deeply disappointed by the failure of the MiG-35 to survive even the first round of the multi-billion dollar competition to sell India 126 Medium Multi-Role Combat Aircraft (MMRCA). This tender, dubbed the combat aviation 'deal of the century', was one of the most lucrative procurement aviation contracts in history, worth an estimated \$10–12 billion.<sup>74</sup> In January 2012, the Indian Government announced that Dassault Rafale had won the competition. Although selecting the MiG entry would have allowed the Indian Air Force to leverage its considerable investment in Russian aerospace technologies, some Indians might have feared relying so heavily and so long—the MMRCA could remain in service for decades—on a single foreign company (the MIG Corporation) that until recently looked like it might go out of business.

Indian analysts speculated that the subsequent Russian decision to cancel the April 2011 INDRA joint naval exercises at the last minute could have been aimed to signify Russia's displeasure.<sup>75</sup> Several Indian warships had already arrived at the port of Vladivostok, the headquarters of the Russian Pacific Fleet and the site of the planned exercise, when they received word that the Russian ships were preoccupied with the relief and recovery operations in Japan, which had been struck the month before by a devastating earthquake and tsunami. Russia also cancelled a joint army exercise with India that June.<sup>76</sup> Nonetheless, the Indian Defence Ministry bought the US AH-64D Apache Longbow attack helicopters rather than the competing Russian-made Mi-28N Night Hunter attack helicopter.<sup>77</sup> Russian helicopter manufactures hope to win at least one of the remaining two Indian military helicopter tenders for 12 heavy-transport helicopters and 197 general-purpose light helicopters, but they face stiff Western competition for both contracts.<sup>78</sup>

In an attempt to sustain its market share, Russia has offered India even its most sophisticated military technology in exchange for keeping India as Russia's largest foreign arms buyer. Russia has also tried to meet Indian demands to transform the bilateral relationship from that of buyer-seller to one based on the joint production and marketing of Russian-Indian weapons to third countries.<sup>79, 80</sup> For example, the two

countries are engaged in the joint development of a multi-purpose fifth-generation 'stealth' fighter. In October 2007, Sukhoi Corporation, which had been seeking a foreign partner for five years and India's state-owned HAL signed an inter-governmental agreement for the joint development and production of a stealth fighter whose development costs could exceed \$10 billion.<sup>81</sup> The Indian Government might need to spend another \$15 billion to develop and maintain the extensive infrastructure needed to base, operate and sustain such advanced platforms.<sup>82</sup> They have completed the first stage of their preliminary design contract and their second stage is scheduled to be finalized by September 2012. In addition, the Indian engineers sent to Russia for additional project-related training completed their courses in July 2011.<sup>83</sup>

The Russian and Indian variants of the common aircraft programme are being developed with different specifications and timelines to meet the needs of both countries. For example, Russia would like to begin mass producing its T-50 prototype in a few years since it is designed to compete with the US F-22 and F-35, which are already in service or about to enter service in a few years. In contrast, the Indian Government, whose Air Force already has superiority over Pakistan and perhaps China in South Asia, thanks to its Su-30MKIs, is willing to wait until the end of this decade to allow for testing different design elements and components on its variant of the plane before also committing to produce several hundred planes. Meanwhile, whereas Russia wants a slim single-seat warplane, the Indian Air Force wants several hundred larger, two-seated variants of the plane.

Differences have also emerged over the relative work shares of the two countries. In addition to each side naturally wanting a larger share, the Russian parties have been reluctant to allow Indian firms to develop some of the plane's most modern and sophisticated components. The participation of the Indian side in the project is expected to increase over time.<sup>84</sup> India will contribute about 30 per cent of the total project design, including composite components with the stealth function and some avionics, cockpit displays, and electronic warfare systems.<sup>85</sup>

In Russia, the Sukhoi aircraft corporation, part of UAC, has already developed and publicly exhibited several T-50 prototypes. Although they want a different design, the Indians have followed the T-50 flight tests with interest since they will use some of its technology and designs in their own plane. In contrast to their defence industrial concerns with China, Russian defence analysts worry less about India's defence industry

competing with Russia in third-party markets, especially as Russia and India aim to export their joint products to other countries' armed forces. For this reason, Russia has been willing to sell its most sophisticated military hardware and technologies to India, despite Chinese discontent about not being given the same opportunity.

#### FUTURE PROSPECTS

Russia should remain India's largest defence partner for at least several years given that the two countries have already signed arms deals worth some \$11 billion in future transactions and have established several important joint ventures.<sup>86</sup> Almost half of the Indian Air Force's inventory is considered obsolete and needs to be replaced with new acquisitions.<sup>87</sup> Geopolitical ties also remain strong, with the two countries elevating their relationship in 2011 to that of a 'Special and Privileged Strategic Partnership'.<sup>88</sup> Russian defence firms have been counting on continuing orders from India to help cushion the decreasing opportunities in China. A few years ago, Russia's previously lucrative arms sales relationship with China drastically decreased and Russian policy-makers want to avert a similar fall in the case of India, whose purchases now account for about half the value of all Russia's foreign military sales.<sup>89</sup>

Nevertheless, the growing competition from Western companies, problems with past Russian sales, potential budgetary cutbacks, and the increasing sophistication of India's indigenous defence industry could lead New Delhi to buy fewer Russian weapons. The Indian Government has always sought to diversify its foreign weapons suppliers despite the higher costs and complexity involved in maintaining a variety of platforms.<sup>90</sup> The Indian military began buying large quantities of Soviet weapons in the 1960s, but has always complimented these purchases with European (and later Israeli) systems. Now the Indian Government has begun buying some US-made armaments. In recent years, the Indian Government has awarded non-Russian companies multi-billion dollar contracts for advanced military planes and helicopters.

Indian officials have also tried, with limited success, to buy more indigenous defence systems. India's arms industry has become more sophisticated and now manufactures a wider range of weapons systems. The Indian Defence Research and Development Organization (DRDO) has focused resources on designing anti-ship, anti-tank, and longer-range ballistic missiles. Indian negotiators typically require foreign weapons

suppliers to stipulate in new contracts a significant transfer of defence technologies to Indian firms. They have also successfully required Russian and other foreign firms to rely less on selling complete turnkey systems and instead consent to engage in the joint research, development, and manufacture of new defence technologies and systems. They also regularly insist that foreign governments agree to allow Indian firms to have a role in producing (under licence), maintaining, and repairing the weapons.<sup>91</sup> For example, Indian officials have been pressing their Russian counterparts to provide more opportunities for the joint research, development, and production of new military technologies and systems.

Putin's return to the presidency does not inspire the same worries in India as in many Western governments, since he and his team are clearly eager to sustain Moscow's key partnerships in Asia as a means of augmenting Russia's own weight in global affairs. But one factor that could become more important over time is that Indians might want to deepen their arms sales with the United States for diplomatic and security reasons. For example, US officials are better positioned than their Russian counterparts to induce the Pakistani Government to crack down on anti-Indian terrorist groups based in Pakistan. Due to its good relations with both India and Pakistan, moreover, Washington is best placed to achieve a settlement to the Kashmir dispute, should New Delhi ever decide to seek outside mediation. The Obama Administration has identified promoting Indian-Pakistan reconciliation as an important objective for re-orienting Pakistani security efforts toward combating terrorism and closing the insurgent camps along the Afghan-Pakistan border. Russian policy-makers, having less influence in Pakistan, find it harder to mediate between Islamabad and New Delhi. Signs of Indian deviation from Moscow's preferences have recently been evident in India's de facto acceptance of US unilateral sanctions on Iran as well as New Delhi's adopting a Western orientation regarding Syria.<sup>92</sup> It will be interesting to see how India positions itself regarding Afghanistan in coming years. Moscow is eager to work with New Delhi and its Central Asian allies to promote regional stability.<sup>93</sup> But many Americans hope that India will serve as a key US partner in greater Central Asia after NATO and the Pentagon drastically scale back their own military presence in the region.

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## APPENDIX

## India's Imports from Russia, 2005–2010

<i>Weapon designation</i>	<i>Weapon description</i>	<i>No. Delivered/Produced</i>	<i>Year(s) of Deliveries</i>	<i>Comments</i>
Kopyo	Aircraft radar	125	2001-2006	
Kh-31A1/ AS-17	Anti-ship missile	200	2000-2007	
3M-54 Klub/ SS-N-27	Anti-ship missile	150	2001-2008	
Il-38SD/May	ASW aircraft	3	2008	Indian Il-38 rebuilt to Il-38SD
Il-38/May	ASW aircraft	2	2009	Ex-Russian; modernized to Il-38SD version before delivery
MiG-29SMT/ Fulcrum	FGA aircraft	10	2010	For use on Gorshkov (Vikramaditya) aircraft carrier
Su-30MK/ Flanker	FGA aircraft	18	2007-2008	Su-30MKI version; exchanged for 18 Indian Su-30K (replacing original planned modernization of Su-30K to Su-30MKI)
Su-30MK/ Flanker	FGA aircraft	26	2009-2010	\$1.5-1.6 b deal; Su-30MKI version; assembled from kits in India; delivery 2009-2011/2012
AK-630 30mm	Naval gun	20	1998-2005	For 3 Brahmaputra (Project-16A) frigates and 4 Kora(Project-25A) corvettes produced in India
T-90S	Tank	310	2001-2006	(L)
T-90S	Tank	150	2009-2010	(L) \$866 m deal (part of \$2.5 b deal); option on some 700 more; assembled in India; delivery 2009-2011/2012
PJ-10 BrahMos	Anti-ship missile	110	2006-2010	(L) Version of Yakhont (SS-N-26); officially joint venture for development but mainly using Russian technology; incl ship-launched, air-launched and submarine-launched and land-based version
Su-30MK/ Flanker	FGA aircraft	75	2004-2010	(L) \$3-5.4 b deal; Su-30MKI version; delivery 2004-2014/2015

*Source:* Stockholm International Peace Research Institute, Trade Register Table of Major Conventional Weapons Transfers from Russia to China, generated 19 November 2011 at <http://www.ripr.org>.