Critical Realism for India's Defence Procurement

Amarjit Singh

It is impressive that within two weeks of coming to power 18 months ago, the new National Democratic Alliance (NDA) government did much to clear the backlog of defence projects. The government released stalled funding for an indigenous aircraft carrier; pushed forth a new momentum for infrastructure along the border areas, especially in the northeast; gave the go-ahead signal to develop a radar tracking station at Narcondam across from the Coco Islands where China has a monitoring station; promised to expedite the finalisation of the Medium Multi-Role Combat Aircraft (MMRCA) purchase, and closed the process since in a modified government-to-government deal; and released $2 billion for the expansion of the Karwar naval base. In addition, the Prime Minister announced a new war memorial for the Indian Navy for its gallant performance in 1971 (though more war memorials are surely forthcoming), and India's Trade Ministry has recommended permitting 100 percent foreign ownership in defence ventures in India, compared to the 26 per cent allowed at present;[1] in this respect, the former Defence Minister announced that foreign ownership up to 49 percent would be allowed, while 51 per cent is on the cards. Within the second two weeks, the new Prime Minister met with all Service Chiefs, the Defence Minister paid a visit to the important

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Jammu and Kashmir (J&K) region, and the Prime Minister formally launched a new imported aircraft carrier amidst other defence-related developments.

The Coco Islands story is particularly amazing, considering that the previous government had delayed the construction of a radar station on environmental grounds, that the hornbill bird was threatened. But, many decision-takers in India would sacrifice its people for the rats. It has happened in the past in Indian history, with Mir Jaffar and Lal Singh, only two of numerous examples. There have been too many fifth columnists and turncoats handling defence in India, which is why the Central Intelligence Agency (CIA) and the former KGB have reportedly been able to buy their way into government decision-taking in India. In fact, recall with regret the effort by the previous Prime Minister to withdraw from Siachen Glacier with an aim at making peace with Pakistan. However, we know that the firm and steadfast must triumph in the end; those who stick to their guns earn the glory. War and military preparedness are always psychological, and mental discipline is essential. Thus, rethinking the priorities and having a positive and realistic bent of mind vis-à-vis defence is a simple philosophical reorientation that is necessary, which our previous governments failed to grasp.

Recent decisions placing defence on a high pedestal illustrate that decision-making and decision-taking need not always be excruciating,and not necessarily involve years of feasibility and cost analysis.[2] What price would you pay to defend India and your liberties and families? Would any price be too much or would you sell the motherland? Decision-taking on defence comes from a moral need to protect the very right to exist. History has shown that the soft and weak were absorbed, enslaved, colonised, and

deprived of their rights by stronger neighbours. Why would any nation-state knowingly be weak? Yet the past 67 years in India have shown that successive governments have done just that. When one lives in a hostile neighbourhood, it is foolish to knowingly be weak, no matter what the cost. In fact, when one is weak, one must become strong; when strong, one must face the enemy.[3] Only through a strong military is there true diplomacy. And that is the realistic approach to defence production as well.

India's Hostile Neighbourhood

Let's go clockwise from the south to analyse India's neighbourhood so as to analyse the dangers surrounding India and derive a realistic sense of India's defence needs: Sri Lanka has only recently emerged from an insurgency mobilising 400,000 troops. The author visited Sri Lanka in 2009 soon after the Tamil insurgency in the north had been quelled, and saw how the many parts of the island had become a cage. Colombo had been turned into a fortress, with no-nonsense soldiers manning numerous roadblocks. The distrust of the Tamils continues, such that a peaceful future is by no means guaranteed. The new Sri Lankan government of Mithripala Sirisena promises to mend ties with India,but this will take time to see how it pans out, not to mention that the right-wing opposition of Mahinda Rajapaksa is still in the wings.[4]

The Maldives has been a victim of coups, for which India has been called upon for assistance, such that even as of April 2015, India was walking a tightrope on the Maldives,[5] which Narendra Modi justifiably failed to visit during his recent Indian Ocean trip to Seychelles, Mauritius, and Sri Lanka. Piracy in the southwest Indian Ocean has taxed the Indian Coast Guard and Navy, with attacks within the Indian coastal zone off the coast of Kerala. This piracy is partly conducted by Al Shabab, allied with Al Qaeda, which is allied with the Taliban (and Boko Haram). Pakistan is a permanent threat, and presently most unstable, with the Taliban angling to somehow gain control of the Pakistani nuclear assets. Learning from

the Sunni loyalties in Syria and Iraq, and funded by Saudi Arabia, it is not altogether impossible that the Taliban will receive armaments and funds from the Islamic State of Iraq and Syria (ISIS), making any peace-making in Afghanistan and Pakistan near impossible. A stone's throw from Pakistan is the volatile Middle East, exemplified by unbending *mullahs* in Iran who still proclaim death to Israel/USA[6], and the inhuman soldiers of the ISIS. In fact, the entire present situation in Syria, Yemen, and Iraq could overflow into Pakistan and feed the Taliban insurgency, resulting in grave consequences for India.

Afghanistan remains volatile and unstable. Notwithstanding the recent elections, the future prospects for Afghanistan are either continued violence or uncertainty, at best, given the deep Inter-Services Intelligence (ISI) interference there. China's suppression of Xinjiang and Tibet continue and India fails to de-recognise China's annexation of Tibet (though this may happen in ten years, with some good luck). India's border with Nepal remains porous, with the Chinese-supported Maoists making inroads.[7] Despite the Nepalese Prime Minister attending Prime Minister Modi's inauguration, and the Nepalese Chief of Army Staff taking the passing-out parade at the Indian Military Academy (IMA) in 2014, Nepal panders to Chinese whims and diktats, such as by illegalising Tibetan refugees in Nepal. And, many Nepalese are still rankled by the 1987 trade blockade imposed on Nepal by the Indian government in power at the time. India's defences are the weakest at the Nepalese border, probably weaker than with Bangladesh and Myanmar, which means that a determined China could seek to come through Nepal, probably reaching the Ganges, if not the Bay of Bengal.

China continues on its juggernaut, outstripping Indian military spending by a factor of four, and still refuses to disavow its claims on Indian territory. In fact, the danger from China is reasonably the most serious of all because China has a vast military-industrial complex, is building defence capabilities close to India's border, and continues to press its claims on

Indian territories. Bhutan, which India vows to protect, has the Chinese claiming its Tawang tract. Thus, Modi made Bhutan his first overseas visit with the intention to defend it and exchange assurances on Indo-Bhutanese military cooperation. Myanmar is still a refuge for the United Liberation Front of Assam (ULFA), allied with the Kachin Independence Army (KIA) of Myanmar, covertly funded by the Chinese. The ULFA is further aligned with the Nationalist Socialist Council of Nagaland (NSCN) that continues violent anti-Indian activity. Though there has been a rapprochement between the USA and Myanmar, and elections are planned there, Myanmar remains a hermit dictatorship. Immigrants from Bangladesh pose a perennial problem for India, even though Modi has spoken on sending them back to Bangladesh[8] and the current Bangladeshi government of Sheikh Hasina is friendlier than predecessor Khalida Zia's. Lastly, the Indian Maoists and Naxalites continue unabated in their internal threat to the Indian Union, supported assuredly by Pakistan and China. None of this can be allowed to slide, and alertness by India is the minimum, yet insufficient requirement. Hence, a statement by the then Defence Minister, Arun Jaitley, was especially reassuring that all help would be forthcoming in plugging operational gaps in defence.[9] The increase in defence spending to $41 billion by 7.7 per cent over 2014-15 is welcome.[10] Thus, although the author agrees with the government's newfound support of Indian defence, there is more to say.

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Deficiencies in Indian Defence

Plugging only a few military gaps is insufficient. What good is it to feed 500 calories to an adult if he needs 2,000? Only comprehensive military investment is required, and no less is reasonable in India's hostile

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neighbourhood environment. Let's return to the author's earlier point of how much would you pay for India's defence? Past governments have so starved the Indian military, that even building of roads at the Arunachal Pradesh border, essential infrastructural sustenance,is insufficient. Defence production enhancement is 40 years overdue, not to mention that India should have attacked China in 1973-74 when it could have won convincingly, the only wild card being the USA's support of China in that period.[11] In the 1970s and 1980s, India fell far behind in its industrial and military development, obsessed instead with internal squabbles and a pernicious emergency, and now finds it an uphill and almost impossible task to catch up with a resurgent and upbeat China. Indian military assets should be thrice the levels of 30-40 years ago. So, increasing assets even by 50 per cent in the next few years, however welcome, will be too little too late. As Manohar Parrikar stated, the 36 Rafales are a "breath of oxygen" for the military, which goes to show how sick the Air Force really is, and needs one to two new squadrons annually of advanced fighter aircraft to regain its health.

Correspondingly, India should be worried about its security, in contrast to anyone who argues for lesser defence expenditure, considering that Indian defence expenditure is still not 2 per cent of the Gross Domestic Product (GDP). India is tremendously short of light and heavy howitzers, attack helicopters, ammunition, and fuel for a prolonged war. The Indian Air Force is not only 50 percent below force levels, but also much of it poor and outdated technology.[12] The stated number of 44 squadrons required is a watered-down figure coming from poverty-stricken decision-takers. Using elementary mathematics, India needs 75 squadrons to hold its own

on two fronts,[13] and perhaps 100 squadrons of 4th generation aircraft to prevail in the air, yet it is at only 22 effective squadrons of mixed generations, excluding squadrons undergoing upgrading and repair. Our submarine forces are also massively depleted. India has not mobilised enough artillery regiments or battle tanks with missile technologies, and its missile research has not translated into significant mass production. The Space and Cyber Commands are woefully underdeveloped. Any surprise that wishing India good luck in a battle with China would be absolutely necessary?

The list goes on: the number of officers is nearly 33 per cent below what we need; soldier morale is low and officer corruption is high; defence salaries are low, and getting lower than those of the police. Astoundingly, a Chief of Defence Staff (CDS) has still not been created; Integrated Defence Commands are still far behind; the Border Security Force (BSF), Indo-Tibetan Border Police (ITBP), and other border patrol units operate out-of-sync with the Indian military; and intelligence sharing among military branches is deficient. Many of these organisational issues cost little to no money to implement, with few side effects. Correspondingly, decisions that do not cost money must be implemented quickly. But, the new government has a monumental task, owing to the backlog of the past 67 years. In its favour is its large majority in the Lok Sabha, somewhat offset by its minority status in the Rajya Sabha.

New Thinking for Defence Enhancement

However, the major change in thinking necessary to change the defence mindset is that all economic activity must lead to defence: if constructing schools, educated personnel help India's defence more than illiterate people. If investing in health and hospitals, a healthier populace contributes to better soldiers, as well as to innovative thinking. Having a cleaner environment contributes to a healthier country, which helps the health of the populace, in turn, helping defence. If developing roads and

infrastructure for newer industries, those industries can be fashioned for military production in the time of war, and roads can move the military faster. If investing in agriculture is good for the farmers and the people, it is good for a military that needs food to march. If mining contributes more steel and copper, they are all needed for defence; electric power generation builds more defence industries; and a territorial army drawn from civilians helps with administering enemy cities captured in war, and so on. National goals, and every aspect of social and industrial life must be oriented towards the defence of the nation. The very purpose of being a nation is to survive as one. A nation lives to but defend itself. If this spirit of nationalism is missing among the Indian populace, defence will be more difficult. Thus, the Engineer-in-Chief (E-in-C) of the Army, the senior-most engineer of all engineering arms in the military, must be thought of as the E-in-C of the whole nation in times of war. War is always around the corner for a country like India, whether in its history, its present, or its future.

Realistic Thinking for Defence Production

The philosophy of defence production and acquisition must also be rethought. Too often, India buys six-submarines, a hundred-plus heavy artillery guns, six C-130J aircraft, ten C-17 transport planes, eight P8-I anti-submarine aircraft, and other heavy assets in one-off purchases, only to not buy these again for many years. Look at the 155 mm artillery gun bought only in the late 1980s, but not bought since.[14] This "piecemeal" acquisition shows unrealistic thinking. India's threat analysis requires it to add fresh assets on a regular basis, such as four submarines a year, every year, one to two squadrons of fighter aircraft a year in perpetuity, introduction of a new aircraft battle group every year or two, addition of new guns and battle tanks by the hundreds every year, a division of soldiers every year,[15] and so on. Moreover, due to constant hardware obsolescence, there must be a continuous infusion of new machines into the arsenal. Any industrial

and production engineer can explain this, but India has given short shrift to high-quality engineering education, the single most necessary asset for developing high-technology weaponry. As of today, comprehensive Indian engineering talent is far below that of China, South Korea, Taiwan, or Japan. Further, if heavy assets are lost in war, how they will they be replaced without India's own continuous production system?

India must, of course, not only manufacture military machines at home, but do so, on a *continuous, annual* basis. This is the crux. Thus, India needs a fundamental shift in priorities and thinking towards realism, which can happen provided the correct personalities are in central decision-taking positions. In addition, India must also develop an export economy, where it has the opportunity of raising revenue through selling fighting ships to Vietnam, the Philippines, and other countries that have the demand for them.[16] This will bring in valuable foreign exchange while further developing indigenous technology, because India needs multiple defence platform programmes that operate in perpetuity. In addition, India must immediately grab the American offer to co-produce military helicopters, Unmanned Aerial Vehicles (UAVs), and artillery pieces in India.[17] Such rare opportunities must not be missed where monetary investment in co-production is shared. This new realism in defence production thinking, where India values the big picture of defence production, is absolutely necessary to advance the state of engineering and defence research in India.

Mass Production of Heavy Military Machines

Can fighting machines be made in India in large numbers? Look back to history, to when the USA manufactured 200,000 combat aircraft in World War II.[18] Therefore, the means and methods of mass production are surely available in the world, but the real question is whether India the will and engineering talent to do so. In this regard, it is well known that South Korea, China, and Malaysia rebuilt themselves in only two decades.

How did they have more money than India to do so? The answer is that they had unity of purpose. Those who say India doesn't have the money, do not realise that the real resources needed are will power, steadfastness of purpose, and a realistic approach to defence acquisition.

Supposing the will can be found, as perhaps demonstrated by the present government, then where is the money? To think that one needs wealth to create wealth is a false notion in absolute terms. Economists are still searching for a panacea, but it should be noted that the total world wealth in 2013 was reported at $241 trillion.[19] Where did it come from? A thousand years ago, monetary notes did not exist. So,how did money grow? The answer is that growth in wealth comes not simply by having money, but from work, sweat, and talent. Wealth is a mystical phenomenon, but wealth creation cannot be quantified by economists with satisfactory accuracy. Talent, which creates wealth, is also a mystical phenomenon. Remember, the inventor Thomas Edison said, "Genius is one percent inspiration, 99 percent perspiration." Hence, the only answer to naysayers is that when you put the plough to the shoulder, wealth arises.

Economic Philosophy and Engineering

This brings us to the concept of economics that India must follow for defence production. *Reaganomics* is credited with creating American wealth by slashing the tax rates of the wealthier citizens. The approach of *Abenomics* in Japan is premised upon the monetary system of economic management, restimulating Japanese growth by infusing money at controlled rates into the economy. Correspondingly, India needs its own system of economic management urgently. India is not, in that sense, in safe hands. However, a strong will from the incumbent government may turn things around. A wilful investment in defence production and skills training to enhance defence assets will add to India's growth.[20] Technology and economics play second fiddle to will power. This is the reality about the generally decreasing foreign acquisition in armaments

from the present 65-75 per cent down to 20-25 per cent.

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Second to will power, engineering skills and methods are critical for defence production. No soldier, marshal, lawyer, or politician can make the machines that a military needs. Engineers design and make ammunition, bullet-proof vests, housing and cantonments, infrastructure at border areas, vehicles and battle tanks, frigates and submarines, missiles and satellites, anti-missile shields, net-centric warfare, Command, Control, Communication, Computers (C4) systems, fighter and transport aircraft, and develop cyber and space controls. A strong investment and deep respect for engineering is the only way to move a nation forward. But, in India, engineering development is all but relegated to the back-burner: Indian manufacturing and machining are behind the curve. Indian metallurgy is poor, and quality control does not match up to world standards. Witness the Delhi High Court judgment directing the Defence Ministry to take consider steps to replace the unreliable INSAS rifle.[21] Even its engineering science and technology in all fields across the spectrum of engineering – from nuclear engineering[22] to constructed pavements – do not compete commensurate to India's weight in the world arena.[23] For instance, China's engineering exports are six times more than India's. China produces world class high-speed maglev trains capable of travelling at 450 km/hr, has an elaborate aircraft manufacturing industry, has more skyscrapers in Shanghai than Manhattan, builds more cities a year than Modi even dreams of (though he does correctly dream big of it, and much more).[24] In a growing economy, an estimated 80 percent of GDP growth is engineering growth. It is, thus, relevant that the majority of the top brass in the Chinese politburo were engineers in the formative years of China's rise, which is why eventually China's economy took off. In 1997, for instance, all seven members of the Politburo Standing Committee in

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China had degrees in the sciences or engineering. Former General Secretary Jiang Zemin earned a bachelor's degree in electrical engineering. In contrast, there are few engineers among Indian Cabinet ministers. Additional analysis reveals that China has been led by a technocracy, preferable for economic development than a bureaucracy.[25] However, if at least the Finance Minister, Defence Minister, and Prime Minister of India understand the value of engineering in defence production, there is hope for the nation. The current Defence Minister is an engineer from an elite Indian institution, so there is hope. There is no alternative to the path of engineering enhancement for self-sufficiency in defence production.

The author recommends that the Indian Army be allowed to be headed by an engineer as the Chief of the Army Staff (COAS), something over which the infantry, artillery, and armoured corps have a lock. The author observes with satisfaction that the majority of officers now hired by the Indian Navy will be engineers. This is a good step: engineers understand technology, design, production, maintenance, planning, and the management behind weapon systems. They help guide the manufacture of fighting ships, design new platforms, and know what new weapon systems should be procured. Engineers can undertake value engineering for military defence production, and innovate for the future. Thus, modern defence production is basically engineering production. Observe that the Indian Navy, with its emphasis on engineering, has created an impressive domestic industrial naval manufacturing base.[26] In contrast, the Indian Air Force, which focusses instead on improving the swagger of its pilots, has not created an effective indigenous aircraft manufacturing base.

Finally, understand that defence production raises a country's GDP. Through defence production, Germany and the USA extricated themselves from the depression of the 1930s. Though Germany today

may not need defence production to further stimulate its economy, India needs both. It is, thus, realistic to understand that defence production and economic growth are in tandem. The arguments of restricting India's defence investments to 2 per cent of the GDP to invest in other areas are, thus, misplaced, and it is fairly evident that going up to 5-6 per cent of GDP is not only feasible, but will add jobs and economic growth, serving as an economic multiplier. Given India's hostile neighbourhood, and the need to physically protect its sovereignty, India needs and deserves nothing less.

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In Conclusion

The biggest change necessary to ensure adequate defence production is a psychological reorientation to bring forth a new Indian personality that looks at the whole nation and every industry as contributing to defence, with maintaining national strength and sovereignty as the highest priority of every citizen and government. In addition, economic advancement must be equated with defence production enhancement. Other than that, there are far too many sharks in India's neighbourhood sniffing for India's blood. Therefore, it is foolish for India to knowingly be weak and not take the necessary steps to reinforce its military; consequently, India must aim for superiority over its neighbours, not parity. It is only then – with a strong military – that there can be true diplomacy.

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without engineering growth, and there is no solid indigenous defence procurement without engineering investment. It is, thus, realistic to understand that defence production and economic growth march in tandem. But, India has given short shrift to engineering education and research, and seriously lags behind the developed world in engineering innovation and quality. So, when concerned parties lament the poor performance of defence production in India, they really need to bemoan engineering research and training across the entire spectrum of engineering disciplines. For instance, India wishes to be a nuclear power but simply doesn't have even one university offering a nuclear engineering degree, though the USA and UK have dozens. It is time for India to pick up its steps and learn what reality is. And, organisational-type decisions that cost little to no money must be implemented quickly.

Subsequently, India needs to acquire adequate will power and steadfastness of purpose to enable the above. Growing advanced engineering talent is itself a massive programme that must precede defence development, or at least move ahead in tandem at the right pace. This strong respect for growing engineering skills has hitherto been woeful, looking at the poor performance of the entire defence production system. Thus, only unity of purpose in this endeavour can direct India's energies with laser-like power. Wealth – supposedly needed for defence production – is an ephemeral phenomenon, but one that is created only by work, perspiration and innovation. It is a substantive fallacy to think that only monetary wealth creates further wealth. But, rare opportunities to co-

produce armaments in India and develop an export-oriented defence facility must not be passed up under any circumstances.

In its earnest need for defence armaments, the Government of India has resorted to a lot of piecemeal acquisition instead of having a continuous purchase paradigm. For instance, 155 mm artillery guns were bought in the 1980s, with none bought since; there is no stated plan to continuously produce indigenous aircraft carriers; and India hasn't planned an annual addition of one to two squadrons of advanced fighter airplanes. Any good production engineer will tell you that continuous production is necessary to initiate continuous improvement. In this regard, India has been hitherto buying fish every now and then rather than learning to fish itself. India is a poor country, but starving its military is not the way to protect its sovereignty and pride.

Notes

1. "India Ministry Proposes Opening Defense to More Foreign Investment," *The Wall Street Journal*, May 30, 2014, available at http://online.wsj.com/articles/india-ministry-proposes-opening-defense-to-investment-1401432026
2. The government has disbanded the long-drawn MMRCA competition and opted for a government-to-government deal for the Rafale.
3. China is following this philosophy, except that it is confronting neutrals and friends, as well, following the teachings of Sun Tzu.
4. "Indian PM Modi Looking to Mend Ties in Historic Visit to Sri Lanka," *Deutsche Welle*, March 13, 2015, available at http://www.dw.de/indian-pm-modi-looking-to-mend-ties-in-historic-visit-to-sri-lanka/a-18313419
5. Nirmala Ganapathy, "India Walks Tightrope over Maldives Political Crisis," *The Straits Times*, March 26, 2015, available at http://news.asiaone.com/news/asia/india-walks-tightrope-over-maldives-political-crisis.
6. "Iran Marks Army Day with Cries of 'Death to Israel, US", *The Times of Israel*, April 18, 2015.
7. The author witnessed the porous border in the late 1970s when Chinese companies constructed roads along the East-West Asia highway in Nepal merely 10-30 miles from the Indian border. There were no Indian security patrols opposing the areas of construction, and smuggling and trafficking through the border was a thriving business.
8. More than 30 million Bangladeshis were legalised since the mid-1970s on an order passed by Fakhruddin Ahmed, then President of India.
9. Rajat Pandit, "Defence Minister Arun Jaitley Assures Navy all Help," *The Times of India*, June 25, 2014.

10. "India's Big Jump in Defense Spending," *The American Interest*, March 07, 2015.
11. Gary J Bass, *The Blood Telegram* (NY: Alfred A. Knoff, 2013).
12. The Air Force has become a virtual "no force" going from its severe depletion of fighter squadrons and half its squadrons using obsolete MiG-21/27 aircraft.
13. China has 50 squadrons of 4th generation aircraft, and another estimated 50 squadrons of 3rd generation aircraft; Pakistan has 25 squadrons; to counter all of Pakistan's and half of China's squadrons, India would require 75 squadrons. Also see, "Report: Chinese Air Force Closes Gap With U.S.," *Defense Tech*, available at http://defensetech.org/2014/12/04/report-chinese-air-force-closes-gap-with-u-s/, December 04, 2014.
14. The Dhanush is still in trials, though acclaimed to be an improvement over the Bofors; for more see,Rajat Pandit, "Trials a Hit, Desi Bofors Outguns Swedish Original," *The Times of India*, April 28, 2015.
15. As was once planned during the mid-1980s.
16. India extended $100 million to Vietnam to buy naval equipment; however, given the costs of naval ships, the amount is paltry. Vietnam requires modern destroyers, frigates, and high-speed, radar evading, missile boats.
17. "US Offers Ground Breaking Defence Technologies to India," *The Times of India*, June 14, 2014.
18. As cited in "United States Aircraft Production During World War II," http://en.wikipedia.org/wiki/United_States_aircraft_production_during_World_War_II
19. Arjun Kharpal, "Global Wealth hit $241 Trillion, but Distribution Skewed," at http://www.cnbc.com/id/101105809, October 11, 2013.
20. In the author's personal communication with Rear Admiral Raja Menon (Retd) in December 2014, he commented that while India had sufficient shipbuilding capacity, the union government was not placing enough orders.
21. Aneesha Mathur, "Delhi HC Notice to Centre for not Phasing out 'Defective' INSAS Rifles," *The Indian Express,*April 23, 2015.
22. And though India wishes to succeed in nuclear engineering, not one university in the country offers nuclear engineering as a major discipline. All nuclear engineering is concentrated with BARC, whose secrecy is stifling.
23. Anuradha Nagaraj, "Lack of Demand and Poor Quality Blamed for Decline in Enrolment in India's Engineering Colleges," *The National Business*, October 21, 2013.
24. "New Government in India Wants to Build 100 Smart Cities", Smart Cities Council, June 06, 2014, available at http://smartcitiescouncil.com/article/new-government-india-wants-build-100-smart-cities
25. For more details, see Roderick MacFarquhar, ed., *The Politics of China: Sixty Years of the People's Republic of China,*3rd edition (Cambridge University Press, 2011), p. 576.
26. Vijay Sakhuja, *Asian Maritime Power in the 21st Century* (Singapore: ISEAS Publishing, 2011).