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Singapore's Security Challenges: How does the RMA Fit In?

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Singapore's Success in Deterrence

Although small, Singapore has developed a sophisticated armed force that has enabled it to deter and defend against any direct military threats, especially during its formative years as a state. Singapore's deterrence strategy has been so successful, that the prospect of war occurring between its neighbours has now become unthinkable. There are three reasons for the success of Singapore's deterrent strategy.

Firstly, Singapore has sought to develop a first rate conventional armed force to dissuade, and if the need arises, to defend against threats posed by its much larger neighbors. As Singapore's small size magnifies its strategic vulnerability, it has sought to gain strategic depth by getting weapons and systems to enhance its power projection capability that will enable it to engage its enemies beyond its borders if required. For example, Singapore has a formidable air force equipped with F-16C/D fighter squadrons and aerial refuelling tankers to extend the reach of its fighters. The replacement of it ageing Skyhawk fleet will further cement the Air Force's strategic reach as it decides on one of either Boeing's F-15E, Dassault's Rafael, or Eurofighter's Typhoon. The next-generation fighter aircraft represented by these replacements will make a quantum leap in sophistication and capability over the A-4 Skyhawks. In the Navy, the French designed Lafayette class frigates will greatly extend the operational radius of Singapore's navy. The stealth frigates, which will become operational between 2005 and 2007, will be multi-mission platforms with anti-air, anti-surface, and anti-submarine warfare capabilities. Singapore's army has also acquired armored personnel carriers and light tanks, including the Bionix family of infantry fighting vehicles.

Secondly, Singapore has developed a sophisticated defence industry to meet specific needs. The refurbishment of the A4 and F5 aircraft, the building of the LSTs, and the development of the Bionix family of infantry fighting vehicles bear testimony to the sophistication of Singapore's defence industry. Singapore is thus committed to further deepen the sophistication of the industry by engaging in collaborative projects with its counterparts in the US, France, Sweden, Israel, and South Africa to explore new concepts, develop critical technologies, as well as enable technology transfer. This is aptly demonstrated by Singapore's participation in the F-35 Joint Strike Fighter program that allows it to have access to proprietary information including flight simulations.

Thirdly, Singapore has consistently allocated a sizeable portion of its annual budget for defence. MINDEF gets up to 6% of the GDP for defence purposes, which has amounted

to about US$4 - 5 billion annually. Of this sum it has consistently spent 4 - 5% on research and development, which has amounted to some US$200 - 300 million annually. The consistent spending on defence as well as defence R&D has enabled the SAF to be at the cutting edge of defence R&D today. Among other things the Defence Science and Technology Agency has used this budget for an 'innovation fund initiative' that aims to fund start-up companies who foster the development of technologies with military applications.

The New Strategic Environment

However, despite the success of Singapore's deterrence strategy and despite the receding inter-state anxieties amongst its neighbours, Singapore's security challenges have grown more complex and diverse. Singapore's strategic environment is increasingly characterized by the transnational nature of threats that include the conduct of terrorist acts by radical Islamic groups. The arrests in December 2001 of 15 members of the extremist Jemaah Islamiah (JI) group in connection with a plot to attack local and Western targets in the city-state demonstrated that Singapore was a prime target of transnational terrorist groups. The political, psychological, and economic damage to Singapore would have been immense if the JI had succeeded. Therefore, the rise of a global extremist Islamic ideology is thus creating a new challenge for the multi-racial multi-religious nation.

Besides the transnational terrorist threat, the safeguarding of trade and energy security have also emerged as important challenges. Singapore's external trade is more than three times its GDP and the disruption of this trade will have serious consequences for Singapore. Located at the crossroads of international air and maritime traffic, aviation security and maritime security (against maritime terrorism and piracy) have emerged as new challenges to Singapore's security. The security of the Malacca Strait, navigated by more than 200 ships daily and 800 oil tankers each year, is thus vital for Singapore's transhipment traffic as well as international commerce. As much of Singapore's energy needs are met by Middle Eastern oil, instability in that part of the world has a direct bearing upon Singapore's economy. Singapore has tried to reduce this vulnerability by trying to meet its energy needs with natural gas supplied from Malaysia and Indonesia. However, this has added pipeline security as well as internal security of neighbouring countries to the city-state's security variables.

In this new strategic environment, therefore, Singapore's military may be called upon for military operations other than war (MOOTW). In this respect, the SAF has committed three Landing Ship Tanks (LSTs), medical teams, C-130s, military observers and logistics support to help restore peace and stability to East Timor, which was its most extensive deployment to date. Singapore's air force (its C-130 aircraft) and navy (its LST) have also played support roles in the multinational reconstruction efforts in Iraq. Although, Singapore has already participated in such operations, they are likely to increase in the future.

Singapore's Revolution in Military Affairs (RMA)

Tim Huxley has termed Singapore's RMA as 'RMA-lite'. This is primarily because Singapore's annual defence budget is small when compared to the United States' US$400 billion. Similarly, MINDEF's defence R&D budget is only in the range of US$200~300 million compared to the United States' over US$50 billion. Hence, in comparison to a giant, Singapore is a midget. Nevertheless Singapore's RMA is not without substance.

Singapore's RMA is about firstly, the exploitation of information technology to develop sophisticated C4ISR capabilities, secondly, the networking of these surveillance capabilities to obtain a comprehensive situation picture for decision making, and thirdly to enable precise effects to be applied to targets of choice. Defence Minister Teo Chee Hean has called the transformed SAF, the Third Generation (3G) force. It is recognised that the traditional modernisation route, which has been immensely successful in the past, may prove inadequate when confronted by the new security environment amidst disruptive technological developments. As a result, the Ministry of Defence formed the Future Systems Directorate (FSD) in February 2003 to promote innovation, challenge established military concepts in order to prepare for the emerging strategic environment. Experimentation will be a key component of Singapore's RMA, with FSD managing up to 1% of the annual defence budget to fund experimentation. Highlighting the important role that experimentation is to play in the SAF of the future, Singapore launched its SAF Centre for Military Experimentation (SCME) in November 2003. The SCME includes three laboratories, namely, the Command Post of the Future Laboratory, Battlelab; and C4I Laboratory. The SCME will allow testing and experimentation of various tactical scenarios, operational concepts, and facilitate doctrinal innovation.

Besides experimentation, a key component of Singapore's RMA is the integrated knowledge-based command and control (IKC2). IKC2 is intended as a complete solution for the conduct of integrated warfare. IKC2 will be both systems based as well as process based. Network-enabled and knowledge-based systems will be introduced and duplicate systems will be eliminated. At the same time, the process of command and control will also become more integrated and joint, and redundant command channels will be removed. With its highly developed knowledge-based economy, well-educated workforce, and a very competent and sophisticated defense industrial and R&D base, it is highly likely that Singapore will succeed in its efforts at military transformation. So serious is Singapore with military transformation and so confident is it of the transformation's success that Singapore announced in June 2004 that it would reduce the period of full-time national service from 30 months to 24 months.

Conclusion

Singapore's strategic environment has initially been about state survival in a hostile environment. Increasingly though, new transnational threats have come to the fore, implying that Singapore's security forces will have to be able to meet the full spectrum of threats, from conventional warfare to low-intensity conflict including counter-terrorism. Singapore's competent technology-enabled military has allowed it to deter and defend against state-centric threats. However, due to the changing strategic environment, military transformation towards the 3G SAF or synonymously, the Singapore version of the RMA, should also facilitate the handling of transnational threats.

A key feature for tackling non-traditional and transnational threats is the need for inter-agency as well as international collaboration and cooperation. Singapore's investment in RMA technologies will therefore have to take these into account. For example, surveillance technologies in the audio, visual and radio frequencies could easily be adopted by all national security agencies. Similarly, the principles of IKC2, if not the technology themselves, can be applied nationally to form a seamless national command and control architecture. The movement in Europe to more open communications architectures can also be emulated in this region to facilitate greater international cooperation.

At the strategic level, Singapore has already made inroads to meet these challenges. The establishment of a National Security Coordination Secretariat (NSCS), led by the Permanent Secretary for National Security and Intelligence Coordination (NSIC), is a key initiative. The NSCS will report to the Prime Minister through the Coordinating Minister for Security and Defence and will oversee national security policy coordination and planning and counter-terrorism intelligence through the National Security Coordination Centre and the Joint Counter Terrorism Centre respectively.

Despite, the major inroads made, much more has to be done at the operational level. The inter-connectedness of internal and external security and the inadequacy of the stovepipe approach means that now, more than ever, Singapore needs to deal with security issues with Total Defence in mind. The Revolution in Military Affairs may consequently have to widen its scope to examine if there are any innovations that can be applied beyond the military to other areas of defence like in the spheres of the civil, economic, psychological, and social defence.

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