# Is Full Spectrum Operations a Viable Strategic Posture for the Singapore Armed Forces?

by MAJ Lee Hsiang Wei

### Abstract:

The author states that the ability to carry out full spectrum operations means that the Singapore Armed Forces (SAF) has to remain well trained in conventional war fighting, coalition operations as well as Operations Other Than War (OOTW). He also points out that Singapore's diplomatic relations with other countries would be very significant for her defence. He highlights how being full spectrum capable would deter opposing forces to attack Singapore. His essay takes into account the mission statement of the Ministry of Defence (MINDEF) and the SAF, "to enhance Singapore's peace and security through deterrence and diplomacy, and should these fail, to secure a swift and decisive victory over the aggressor." The author concludes that for MINDEF and the SAF to achieve its mission it is necessary for the SAF to maintain the strategic posture of full spectrum operations. However, he is aware that the ability for the SAF to maintain full spectrum operations in the future would depend on the resources available to MINDEF. In the near future, the budget allocated to MINDEF will inevitably face increasing pressures from social development sectors. In the long run, MINDEF and the SAF will need to continue to build on the public trust and to be prudent in the spending of the tax dollar.

Keywords: Deterrence; Diplomacy; Swift and Decisive Victory; Budget; Full Spectrum

# INTRODUCTION

The ability to carry out full spectrum operations means that the SAF has to remain well trained in conventional war fighting, coalition operations as well as OOTW. In 2005, Mr Teo Chee Hean, then Minister for Defence, highlighted in a speech at SAFTI Military Institute that in addition to honing the conventional war fighting skill set, "3<sup>rd</sup> Generation SAF officers must be prepared for a wider spectrum of operations. They will have to operate with other national security and civil agencies, with coalition partners, with Non-Government Organisations (NGO) in the glare of the global media."<sup>1</sup>

The question whether full spectrum operations is a viable strategic posture for the SAF or having to choose any one of the component military operational skill sets needs to be answered at both a needs as well as a resource perspective.

This essay will take into account the mission statement of MINDEF and the SAF, "to enhance Singapore's peace and security through deterrence and diplomacy, and should these fail, to secure a swift and decisive victory over the aggressor."<sup>2</sup>

Let's look at the argument that maintaining full spectrum operations is a necessity rather than a question of viability. It would only be foolhardy for the SAF to choose to focus on any one of the military operational skill sets. Despite the necessity for the SAF to maintain full spectrum operations, the budget allocation for MINDEF in the future years will face pressures from other needs of the Singapore population and the SAF would need to continue to build on the public trust and find innovative and creative means to reap greater returns on each defence dollar spent. From the mission statement, it is easy to understand that the SAF seeks to ensure Singapore's peace and security via a three-pronged strategy – (1) deterrence, (2) diplomacy and (3) a swift and decisive victory as seen in *Figure 1*.

Participating in these missions is as much about showing competence of the SAF as it is about sharing skills or building patterns of operational predictability and communication.

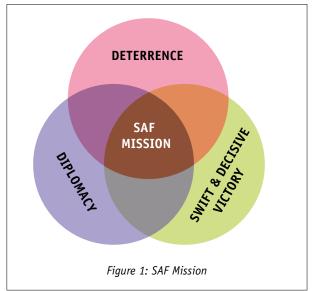
# DETRRENCE

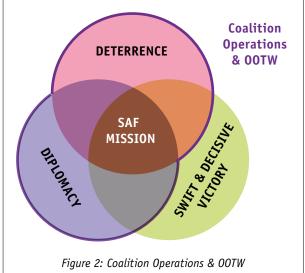
The concept of military deterrence is the use of threats by one state to convince another to refrain from initiating a specific military action.<sup>3</sup> The Director of Military Sciences at the Royal United Services Institute, Michael Codner, argued that military deterrence could only be achieved when the user state has established the perception of capability to deliver a military outcome. The perception of will

and reputation of the ability to implement intentions effectively are also important elements of military deterrence.<sup>4</sup> For the SAF to achieve deterrence over potential aggressors, there is a need to participate in coalition operations and OOTW. In these missions, these soldiers serve as ambassadors for the nation. The soldiers' vigilance, skill and adaptability in unfamiliar environments enhance the SAF's reputation as a professional outfit.<sup>5</sup> Through positive displays, the SAF can build a positive reputation which would act as deterrence against potential aggressors. Participating in these missions is as much about showing competence of the SAF as it is about sharing skills or building patterns of operational predictability and communication.<sup>6</sup>

# DIPLOMACY

Defence diplomacy serves specific foreign and security policy objectives. It creates sustainable cooperative relationships, thereby building trust and facilitating conflict prevention.<sup>7</sup> Mr. Kwa Chong Guan, Head of External Programmes at the S. Rajaratnam School of International Studies (RSIS), described that defence diplomacy had become an important tool of a state's foreign and security policy, a result of rising





reliance and appreciation among states of multilateral avenues to discuss security issues both at the regional and international levels.<sup>8</sup> The valuable contributions

of SAF personnel in coalition the security challenges we now face. Such operations allow the SAF to further

operations and OOTW reflect Given these preconditions, the need its interests lies solely on the transnational nature of for the SAF to be able to achieve a swift and decisive victory is one of necessity and basic survival.

selected international agendas that the SAF is unable to carry out alone. The Operation Blue Sapphire (OBS) missions to the Gulf of Aden to combat piracy is an example of the SAF protecting Singapore's interests as part of the larger international agenda. Lieutenant Colonel (LTC) Richard Lim, then Deputy Commander of the Combined Task Force 151 to the Gulf of Aden in 2010, aptly argued that:

"The deployment of a Task Group to an area 4,000 nm from home could not have more strongly underscored Singapore's oft-stated position that ensuring maritime security in the key waterways of the world cannot be the province of any State acting alone. Rather, it requires the commitment of all stakeholders including littoral states, user states, industry as well as members of the international community."9

In today's interconnected world, it is expected that all countries must do their part to maintain security and stability and Singapore is a responsible member of the international community.<sup>10</sup> Participating in both coalition and OOTW missions allows for the SAF to not only become a respected member of the international defence community but also to punch above her weight and keep the major powers engaged in the region to promote stability.<sup>11</sup>

# SWIFT AND DECISIVE VICTORY

The ability to ensure a victory in any conflict and to protect the country's interests is the bread and butter of any armed force.<sup>12</sup> Caspar Weinberger, the Secretary of Defence to President Ronald Regan, argued in a speech in 1984 that the assurance of the nation's

survival and protection of its armed forces and its security policy.13 The SAF is no different and hence the SAF needs to always be well trained in conventional

war fighting. Singapore has structural vulnerabilities stemming from its small size in landmass, population and virtual lack of natural resources.<sup>14</sup> For the



SAF to engage an aggressor in a protracted war is disadvantageous. Given these preconditions, the need for the SAF to be able to achieve a swift and decisive victory is one of necessity and basic survival.

# CAN SAF AFFORD TO CHOOSE JUST ONE OF THE MILITARY OPERATIONAL SKILL SETS?

From the use of the term "should these fail" in SAF's mission statement, one can infer that the "swift and decisive victory" is viewed a last resort. Some may argue that the SAF can just rely on this 'last resort' and focus wholly on the conventional war fighting skill set. This strategic posture is not viable as Singapore would only rely on a single method to quard her national interests and sovereignty. In the event of a war or conflict and the SAF is called upon to utilise its conventional war fighting skill set, the ramifications on Singapore's economy and population would be far reaching. Unlike other geographically larger countries where parts of the country are able to function normally despite an ongoing war, Singapore's lack of strategic depth means that the whole country will be affected—the economy will grind to a halt and almost half the population will be mobilised for the war effort. Singapore might win the war, but damage to Singaporean's way of life would take generations to recover. It is highly doubtful that any Singaporean would support such a strategy. Given the drastic consequences and the difficulty of recovery in a war scenario, it would be in our interests to avoid getting into war as far as possible. In the name of 'prevention is better than cure', it would make sense to build up layers of buffers via deterrence and diplomacy.

As much as we devote our efforts to prevent a war scenario, we cannot entirely eliminate the possibility of war. We still need to be prepared for that nonzero probability of a war scenario. Moreover, it is not feasible for the SAF just to focus on either coalition operations or OOTW and forgo the conventional war fighting skill set. As argued earlier, the ability to ensure a victory in any conflict is the bread and butter of any armed forces in the world. If the SAF loses this ability, the SAF will be merely an empty shell, trying to achieve deterrence or diplomacy without any real substance. If the SAF chooses this scenario, potential adversaries, even those with rudimentary intelligence gathering capability, will notice that the SAF's deterrence and diplomacy is not premised on something concrete and substantial. The strategy of forgoing the SAF's conventional war fighting skill set would be bound to fail.

# THE RESOURCE CHALLENGE

Every year, MINDEF gets a significant portion of the Singapore Budget. MINDEF was allocated S\$12.08 billion in FY2011 and S\$12.3 billion in FY2012, approximately a quarter of the government's annual expenditure, towards achieving its mission.<sup>16</sup> While the MINDEF budget is capped at 6% of the national gross domestic product (GDP), the MINDEF budget

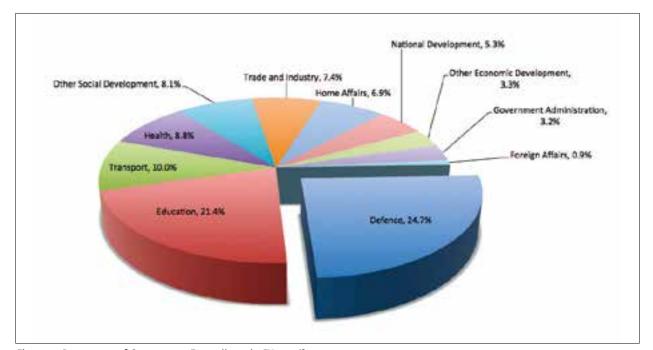


Figure 4: Percentage of Government Expenditure in FY2011.<sup>15</sup>

since 2002 had typically been between 4.5% and 5% of the GDP, growing by about 4% annually on average.<sup>17</sup> The steady defence budget over the years, through both good and difficult economic times, sends a strong signal of Singapore's commitment to defence and ensures that the SAF is always well prepared to confront security challenges.

Over the last couple of years, there have been calls for a moderation in MINDEF's share of the annual budget. During the 2012 Committee of Supply Debate in Parliament, Mr. Pritnam Singh who is a Workers Party Member of Parliament (MP) for Aljunied Group Representation Constituency (GRC), brought up the possibility for some of MINDEF's budget to be spent on social security instead:

"... the security architecture in the region, in particular Association of Southeast Asian Nations (ASEAN), and the relationship between the militaries in the region gives reason to be relatively positive about the low probability of outright military conflict breaking out in the region. This is especially in view of the national resources expended towards defence diplomacy in particular... the paradigm that defines the strategic environment, especially between our immediate neighbours appears to be entering a new phase of stability. This will inevitably increase the pressure on the government to reduce the defence budget for uses, such as health and education."<sup>19</sup>

There is an increasing perception by members of the Singaporean public that Singapore is in no danger of being attacked by a foreign aggressor. In addition to Mr. Pritnam Singh's comment in Parliament, the discussions on various online blogs and forums have echoed a growing sentiment that the MINDEF budget should be reduced. Given Singapore's ageing

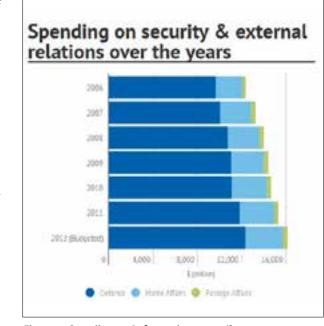


Figure 5: Spending on Defence since 2006.<sup>18</sup>

population, it is understandable that there will be growing pressures for more expenditure to be allocated towards social spending. The Ministry of Health, for example, would require a higher expenditure as Singapore strives to keep healthcare affordable for the growing number of elderly Singaporeans.<sup>20</sup>

For full spectrum operations to continue to remain a viable strategic posture for the SAF, there has to be sufficient resources for MINDEF to undertake efforts in all three military operational skill sets. The competition for a slice of the Singapore Budget will undoubtedly place pressures on MINDEF in the coming years. The commonly held perception is that militaries around the world are reducing their budgets and Singapore should do the same, especially with favourable regional atmospherics. In 2011, 62 countries reported a decrease in military spending due to austerity and deficit-reduction measures in the wake of the global financial and economic crisis that broke in 2008.<sup>22</sup> 18 European countries have seen

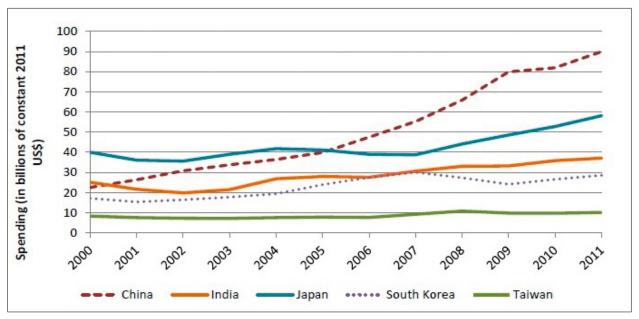


Figure 6: Growth in Defence Spending since 2000.<sup>21</sup>

real-terms falls of more than 10% in military spending since 2008.<sup>23</sup> Even the largest two spenders in Europe, the United Kingdom (UK) and Germany, plan further cuts of at least 7.5% through till 2015.<sup>24</sup>

For MINDEF and the SAF to ensure that full spectrum operations continue to be a viable strategic posture for the SAF, the SAF has to both enhance its public trust, as well as to learn to increase efficiency to do more with less.

This common perception is inaccurate as the major countries in Asia have been increasing their defence spending over the past five years, even during the economic downturn. This trend is unlike to change especially with the various territorial disputes, such as the Spratly Islands and Diaoyu Islands, in the region.

Singapore's defence expenditure, apart from allowing the SAF to ensure mission success, also has a huge signaling effect on the defence watchers as well as countries in the region. MINDEF's annual budget allocation is a publicly available number and a downward trend to the budget may give the impression that Singapore is changing her attitude towards the defence of the nation. In the medium to long term, this impression will make us potentially more vulnerable.

For MINDEF and the SAF to ensure that full spectrum operations continue to be a viable strategic posture for the SAF, the SAF has to both enhance its public trust, as well as to learn to increase efficiency to do more with less.

The public trust in the SAF spending its budget prudently is essential for the SAF to maintain full spectrum operations. If this public trust was lost, it would be difficult for the government, regardless of the political will, to allocate MINDEF and the SAF with a sufficient budget to maintain full spectrum operations and to achieve its mission. Minister for Defence, Dr Ng Eng Hen, has also reiterated this in the 2012 Committee of Supply debate.<sup>25</sup> It is also possible that in the coming years, the budget allocated to MINDEF will be reduced in either real or absolute terms. The MINDEF portion of the budget may also be capped at the lower value than the current 6%. MINDEF and the SAF would have to increase the efficiency of the allocated budget to achieve its mission. Through creativity, innovation and education, the SAF can refine its processes and doctrines to reap a greater return on each defence dollar spent. New training pedagogies can also be explored to ensure that SAF personnel remains well trained and "prepared for a wider spectrum of operations to operate with other national security and civil agencies, with coalition partners, with NGOs in the glare of the global media."<sup>26</sup>

## CONCLUSION

For the MINDEF and the SAF to achieve its mission, it is a necessity for the SAF to maintain the strategic posture of full spectrum operations. Electing to choose and focus on just one of the military operational skill set would be foolhardy and ultimately disastrous for Singapore, especially in times of need. The ability for the SAF to maintain full spectrum operations in the future would depend on the resources available to MINDEF. In the near future, the budget allocated to MINDEF will inevitably face increasing pressures from social development sectors. MINDEF and the SAF will need to continue to build on the public trust and to be prudent in the spending of the tax dollar. In addition, there will be an increasing need for the SAF to find ways to reap a greater return on each defence dollar spent. 🔊

#### REFERENCES

Alexander, Keith. "U.S. Cyber Command: Organizing For Cyberspace Operations, Statement Before The House Committee On Armed Services,"

Andrew Krepinevich. Cyber Warfare – A "Nuclear Option"?. Center for Strategic and Budgetary Assessments. 25.

Ball, James. The Washington Post, "Iran preparing internal version of Internet." 2013. http://articles.washingtonpost. com/2012-09-19/world/35496978\_1\_huawei-iranian-activists-iranian-government.

Chico, Harlan, and Ellen Nakashima. "Suspected North Korean cyberattack on a bank raises fears for S. Korea, allies." The Washington Post, August 29, 2011. http:// articles.washingtonpost.com/2011-08-29/world/35271097 \_1\_bank-incident-bank-attack-cyberattack (accessed December 24, 2012).

Chong, Alan, and Liang Tuang Nah. S Rajaratnam School Of International Studies, "Framing Cyber Warfare: Between Offence and Defence." 2013. http://www.rsis.edu.sg/ publications/Perspective /RSIS0952011.pdf.

Clarke, Richard. Cyber War: The Next Threat to National Security and What to Do About It. New York: HarperCollins Publishers, 2010.

Cordon, Gavin. "Armed forces are vulnerable to cyber attack, warn MPs." The Independent, 2013. http://www.independent.co.uk/news/uk/home-news/armed-forces-are-vulnerable-to-cyber-attack-warn-mps-8443693.html (accessed January 12, 2013).

Dorothy, Denning. "Barriers to Entry," IO Journal (2009): 6-10, http://faculty.nps.edu/ dedennin/publications/ Denning-BarriersToEntry.pdf

Derrick, Ho. The Straits Times, "An interactive look at how the Government has spent its money over the years." 2013. http://www.straitstimes.com/the-big-story/budget-2013/ story/interactive-look-how-the-government-has-spent-itsmoney-over-the-yea.

Ellen, Nakashima. The Washington Post, "Stuxnet was work of U.S. and Israeli experts, officials say." 2013. http://articles. washingtonpost.com/2012-06-01/world/35459494\_1\_ nuclear-program-stuxnet-senior-iranian-officials.

Eneken, Tikk, Kaska Kadri, Rünnimeri Kristel, Kert Mari, Talihärm Anna-Maria , and Vihul Liis. NATO Cooperative Cyber Defense Centre of Excellence , "Cyber Attacks Against Georgia: Legal Lessons Identified." 2013. http://www. carlisle.army.mil/ DIME/documents/Georgia 1 0.pdf. Fildes, Jonathan. BBC, "Stuxnet virus targets and spread revealed." 2013. http://www.bbc.co.uk/news/technology-12465688.

Gargan, John. "To Defend a Nation: An Overview of Downsizing and the U.S. Military." M@n@gement. 2. no. 3 (1999): 221-232. http://www.management-aims.com/ PapersMgmt/23Gargan.pdf

Jeffery Carr. Inside Cyber Warfare: Mapping the Cyber Underworld, (Sebastopol: Oreilly Media, 2011).

Kaspersky Lab, "Kaspersky Lab provides its insights on Stuxnet worm." 2013. http://www.kaspersky.com/about/ news/ virus/2010/Kaspersky\_Lab\_provides\_its\_insights\_ on\_Stuxnet\_worm.

Krepinevich, Andrew. Center for Strategic and Budgetary Assessments (CSBA), "Cyber Warfare: A "Nuclear Option"?." 2012.

Lim, Richard. "Operation Blue Sapphire-Reflections."POINTER. v.\_36. n.\_2 (2010): 23-29. http://www.mindef.gov.sg/ content/imindef/publications/pointer/journals/2010/ v36n2/feature4/\_jcr\_content/imindefPars/0003/file. res/23-29\_Operation\_Blue\_Sapphire lowres.pdf

Limer, Eric. Gizmodo, "Meet Red October: The Global Cyber-Espionage Ring That Spent 5 Years in the Shadows." 2013. http://gizmodo.com/5975793/meet-red-october-theglobal-cyberespionage-ring-that-spent-5-years-in-theshadows.

LiveSquare Security, "Cyber Warfare: the good, the bad, the ugly." 2012. http://www.arizonatele.com/atic/docs/ ATIC\_ Cyber\_Warfare\_Presentation\_11\_17\_11.pdf.

Lynn, William. US Department of Defense, "Defending a New Domain : The Pentagon's Cyberstrategy." 2012. http://www. defense.gov/home/features/2010/0410\_cybersec/lynn-article1.aspx.

Mann, Joseph. Fatal System Error. New York: Public Affairs, 2010.

Markoff, John. "Old Trick Threatens the Newest Weapons." The New York Times, 2009. http://www.nytimes.com/2009/10/27/ science/27trojan.html?ref=cyberwar &\_r=0.

Markoff, John, and Andrew Kramer. "U.S. and Russia Differ on a Treaty for Cyberspace ." The New York Times, 2009. http://www.nytimes.com/2009/06/28/ world/28cyber. html?pagewanted=all Ministry of Home Affairs, "1 October 2009: Singapore Infocomm Technology Security Authority Set Up to Safeguard Singapore against IT Security Threats." 2013. http:// www.mha.gov.sg/ news\_details.aspx?nid=MTU2MQ==-OtPkaml9VAY=.

Netmarketshare.com, "Desktop Operating System Market Share." 2013. http://www.netmarketshare.com/operatingsystem-market-share.aspx?qprid=8&qpcustomd=0.

Netmarketshare.com, "Mobile/TabletOperatingSystemMarket Share." 2013. http://www.netmarketshare.com/operatingsystem-market-share.aspx?qprid=8&qpcustomd=1.

Paganini, Pierluigi. "Concerns Mount over North Korean Cyber Warfare Capabilities." 2012. http://www.infosecisland.com/ blogview/21577-Concerns-Mount-over-North-Korean-Cyber-Warfare-Capabilities.html (2012).

Posner, Gerald. The Daily Beast, "China's Secret Cyberterrorism." 2012. http://www.thedailybeast.com/ articles/2010/01/13/chinas-secret-cyber-terrorism.html

Public Broadcasting Service, "The Uses of Military Power." 2013.

http://www.pbs.org/wgbh/pages/frontline/ shows/ military/force/weinberger.html.

Ramesh, S. "New IT Security Authority to safeguard Singapore against cyber threats." Channel News Asia, 2009.

http://www.channelnewsasia.com/stories/ singaporelocalnews/print/1008285/1/.html.

Reed, John. DefenseTech, "Proof That Military Chips From China Are Infected?." 2012. http://defensetech. org/2012/05/30/smoking-gun-proof-that-military-chipsfrom-china-are-infected/.

Sharma, Amit. "Cyber Wars: A Paradigm Shift from Means to Ends ." Virtual Battlefield.

http://www.ccdcoe.org/publications/virtualbattlefield/01\_ SHARMA\_Cyber\_Wars.pdf (2013).

The Economist, "Cyberwar: War in the fifth domain." 2013. http://www.economist.com/node/16478792.

Thomas C. Reed, At the Abyss: An Insider's History of the Cold War (New York, 2004).

UPI. "North Korea blamed for cyberattack." 2011. http://www. upi.com/ Top\_News/World-News/2011/08/30/North-Koreablamed-for-cyberattack/UPI-48281314 705600/ (2012).

## **ENDNOTES**

- MINDEF, "Speech by Mr. Teo Chee Hean, Minister for Defence, at SAFTI MI 10th Anniversary Dinner, 25 August 2005." http://www.mindef.gov.sg/imindef/press\_room/ official\_releases/nr/2005/aug/25aug05\_nr2/25aug05\_ speech2.print.img.html.
- MINDEF. SAF Mission. http://www.mindef.gov.sg/ imindef/about\_us/mission.html
- Huth, Paul. "Deterrence And International Conflict: Empirical Findings and Theoretical Debates." Annual Review of Political Science. 2. (1999): 30.
- Codner, Michael. Royal United Services Institute, "Defining 'Deterrence' - Framing Deterrence in the 21st Century." http://www.rusi.org/downloads/assets/ Defining\_Deterrence\_-\_A\_Pre-Conference\_Note.pdf.
- MINDEF, "Speech by Minister for Defence Dr Ng Eng Hen, at the Overseas Service Medal Presentation Ceremony." 2013. http://www.mindef.gov.sg/imindef/press\_room/official\_ releases/sp/2011/30jun11\_speech.print.img.html.
- Medcalf, Rory. The Diplomat, "Can Military Diplomacy Keep the Peace in 2013?." 2013. http://thediplomat. com/flashpoints-blog/2013/01/05/can-militarydiplomacy-keep-the-peace-in-2013/.
- Muthanna, KA. "Military Diplomacy." Journal of Defence Studies. 5. no. 1 (2011): 3. http://idsa.in/system/files/ jds\_5\_1\_kamuthanna.pdf 2013.
- S.Rajaratnam School of International Studies (RSIS), "DEFENCE DIPLOMACY IN SOUTHEAST ASIA."2013. http://www.rsis.edu.sg/publications/conference\_ reports/Defence Diplo book.pdf.
- 9. Lim, Richard. "Operation Blue Sapphire -Reflections."Pointer. v.\_36. n.\_2 (2010): 23-29. http:// www.mindef.gov.sg/content/imindef/publications/ pointer/journals/2010/v36n2/feature4/\_jcr\_content/ imindefPars/0003/file.res/23-29\_Operation\_Blue\_ Sapphire lowres.pdf (2013).

10. Ibid. 4.

11. *MINDEF*, "Speech by Minister for Defence Dr Ng Eng Hen, at the Overseas Service Medal Presentation Ceremony (2011)." 2013.

http://www.mindef.gov.sg/imindef/press\_room/
official\_releases/nr/2011/nov/18nov11\_nr2/18nov11\_
speech.print.img.html.

- 12. Gargan, John. "To Defend a Nation: An Overview of Downsizing and the U.S. military." M@n@gement. v.\_2. n.\_3 (1999): 221-232. 2013. http://www.management-aims.com/PapersMgmt/23Gargan.pdf
- Public Broadcasting Service, "The Uses of Military Power." 2013. http://www.pbs.org/wgbh/pages/frontline/shows/ military/force/weinberger.html.
- 14. Wei Chong, Ong. S.Rajaratnam School of International Studies, "Singapore's Defence Spending: A Long-term Approach." 1. 2013. http://www.rsis.edu.sg/publications/Perspective/ RSIS0062010.pdf.
- 15. Ministry of Finance, "Singapore Budget FY2011
  Expenditure Estimates." 2013.
  http://www.mof.gov.sg/budget\_2011/revenue\_
  expenditure/attachment/5GOS Expenditure EE2011.pdf.
- 16. Ministry of Finance, "Singapore Budget 2012." 2013. http://www.mof.gov.sg/budget\_2012/expenditure\_ overview/mindef.html.
- 17. Channel News Asia, "MINDEF manages its budget "prudently": Ng Eng Hen." 2013. http://www.channelnewsasia.com/stories/ singaporelocalnews/view/1187342/1/.html.

MINDEF, "Speech by Minister for Defence Teo Chee Hean, at Committee of Supply Debate 2009." 2013. http://www.mindef.gov.sg/imindef/press\_room/ official\_releases/ps/2009/12feb09\_ps/12feb09\_ps3. print.img.html.

MINDEF, "Speech by Minister for Defence Dr Ng Eng Hen at the Committee of Supply Debate 2012." 2013. http://www.mindef.gov.sg/imindef/press\_room/ official\_releases/ps/2012/06mar12\_ps/06mar12\_ ps.print.img.html.

 Derrick, Ho. The Straits Times, "An interactive look at how the Government has spent its money over the years." 2013. http://www.straitstimes.com/the-bigstory/budget-2013/story/interactive-look-how-thegovernment-has-spent-its-money-over-the-yea.

- 19. Singh, Pritnam. MINDEF, "Speech by Minister for Defence Dr Ng Eng Hen at the Committee of Supply Debate 2012." Last modified 06 Mar 2012. Accessed February 4, 2013. http://www.mindef.gov.sg/imindef/press\_room/ official\_releases/ps/2012/06mar12\_ps/06mar12\_ ps.print.img.html.
- 20. Ministry of Finance, "MINISTRY OF HEALTH (MOH)." 2013. http://www.mof.gov.sg/budget\_2012/expenditure\_ overview/moh.html.
- 21. Center for Strategic and International Studies, "Asian Defense Spending, 2000-2011." 2013. http://csis.org/files/publication/121005\_Berteau\_ AsianDefenseSpending\_Web.pdf.
- 22. Stockholm International Peace Research Institute, "Recent trends in military expenditure." 2013. http:// www.sipri.org/research/armaments/milex/resultoutput/ trends.
- 23. Ibid.
- 24. Ibid.
- 25. Ibid, 6.
- 26. MINDEF, "Speech by Mr. Teo Chee Hean, Minister for Defence, at SAFTI MI 10th Anniversary Dinner, 25 August 2005." 2013. http://www.mindef.gov. sg/imindef/press\_room/official\_releases/nr/2005/ aug/25aug05\_nr2/25aug05\_speech2.print.img.html.



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