

# FUTURE OF SINGAPORE'S CONSCRIPT ARMY

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by

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## ABSTRACT

FUTURE OF SINGAPORE'S CONSCRIPT ARMY, by MAJ David Kwek, 140pages.

Since its inception 50 years ago, the Singapore Army has relied on conscription to raise a large ground force which has been the basis for its deterrence strategy. While considerably effective thus far, the future holds several challenges to the viability of conscription, namely the rising prevalence of asymmetric conflict, ascendancy of firepower over maneuver, and a changing Singaporean demographic. To consider if conscription remains the most apt mode of building Singapore's army, the thesis examines the experience of similarly placed countries Israel, Taiwan and Latvia and considers three possible futures: to retain the current cadre-conscript model, adopt an expansible model, or shift to an all-volunteer force. The analysis is guided by Long's Applied Professional Case Study Research method, which considers the perspectives of both the professional military and stakeholders, and also includes best practices from the management domain to develop a well-rounded implementation strategy. The thesis argues that the cadre-conscript model, though imperfect and not the popular option, remains the most suitable, feasible and acceptable way to addressing the future challenges in Singapore's current context.

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## ACRONYMS

ADM	Army Design Methodology
APCSR	Applied Professional Case Study Research
ASEAN	Association of Southeast Asian Nations
AVF	All-Volunteer Force
CBA	Capability Based Assessment
NS	National Service
NSF	Full-Time National Servicemen
NSmen	Operationally Ready National Servicemen
SAF	Singapore Armed Forces



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## CHAPTER 1

### INTRODUCTION

Singapore is the smallest nation in Southeast Asia, occupying only 278 square miles with a population of 5.6 million. Since its independence in 1965, the Singapore Armed Forces (SAF) has served as the ultimate guarantor of Singapore's sovereignty in a historically troubled region. As a small country, prevention of conflict is critical. To achieve this, the SAF deters aggression through its ability to mount a sizeable and credible defense, enabled by universal conscription and a strong technological base, and enhances Singapore's policy space through military-to-military cooperation with regional and global partners. These efforts are undergirded by a strong political commitment to defense and a robust economy to resource it.

While the SAF is regarded today as one of the region's most technologically advanced and capable militaries,<sup>1</sup> the future holds great uncertainty. Externally, big power competition for influence in the region is likely to take hold, and may increase pressures on smaller states to take sides. In addition to safeguarding against conventional interstate conflict, armed forces will also be required to respond to hybrid threats. Russia's employment of "little green men" and a concerted information campaign in its takeover of Crimea in 2014 is the prime example. Transnational terrorism too, though seemingly stymied in the Middle East, has shown signs of resurgence in Asia and will be a significant threat to multicultural societies around the world.

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<sup>1</sup> Ministry of Defence Singapore, "History," MINDEF Singapore, accessed 15 October 2018, <https://www.mindef.gov.sg/web/portal/mindef/about-us/history>.

Domestically, Singapore is facing a slew of “first world challenges.” Increased economic opportunities and changing aspirations have resulted in Singapore having the second lowest birthrate in the world at 1.16. Coupled with increasing life expectancies, Singapore has a fast aging population which imposes greater demand for social spending.

The large conscript army is also going out of fashion. Following the end of the Cold War, many nations have capitalized on the peace dividends to replace their large infantry-based armies with smaller professional armies equipped with highly efficient weapons and equipment. Looking ahead, this trend of military technology modernization is expected to continue, with the proliferation of unmanned systems and robots, and the inevitable militarization of artificial intelligence.

Taken as a whole, these trends raise questions on the future role and effectiveness of Singapore’s large conscript army. Conscription, being excellent at raising up large armies quickly, has been the bedrock of Singapore’s deterrence, allowing it to achieve some degree of quantitative parity against its regional neighbors. However, the future trends seem to indicate that the Singapore army will need more than just mass to be effective. Threats can come from state and non-state actors, through the physical and virtual domains. Non-traditional equipment and skills may be required for this new army, and the relevance of conscript forces will be questionable. Domestically, the challenges of sustaining universal conscription will be even more pronounced, as budgets and national commitment will be strained, in order for an aging Singapore to keep up in an economically more competitive world.

## Research Question and Significance

While these challenges would not be completely unexpected to Singaporean policy makers, it is hoped that the author can offer a unique perspective to the issue from his experience having attended a professional field-grade level command and staff officer course in the U.S. Army. With this view, this thesis seeks to answer the primary research question: “whether a conscript army remains relevant for Singapore going forward?” This will be broken down into the following sub-questions: (1) what purposes does conscription serve; (2) what are the possible future scenarios that challenge the status quo; (3) what is the experience of other countries with conscription; and (4) how does Singapore’s context determine the optimal way forward?

This thesis will be significant as it seeks to tackle a real problem facing Singaporean policy makers, and if not solve then at least offer a researched perspective for consideration. In addition to being applicable to Singapore, this research and findings could also benefit other small states with similar security dynamics and considerations.

## Definitions

National Service (NS) is Singapore’s version of conscription, which is compulsory and applied universally, not by selection or lottery, to all citizens and Permanent Residents above the age of 16.5 years.<sup>2</sup> Conscripts are referred to as full-time National Servicemen (NSF) and undergo full-time training for about two years. After which, they transit into the reserves and are referred to as Operationally Ready National

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<sup>2</sup> First-Generation PRs are exempted from conscription due to their age. Though both males and females are eligible for conscription, only males have been conscripted in practice.

Servicemen (NSmen), with their reservist obligations<sup>3</sup> lasting until 40 to 50 years of age, depending on rank. The term “citizen-soldier” is used to refer to the collective group of NSFs and NSmen and in some instances, pre-enlistees who have yet to be conscripted. Training for these citizen-soldiers is generally conducted and supervised by military regulars, who are volunteer career soldiers on contract. The term “combat productivity” is used multiple times in this thesis, and can be described as a measure of efficiency in the accrument and delivery of combat power.

### Caveats and Assumptions

First and foremost, it is assumed that the desire for sovereignty remains a top priority. This is not trivial, as the concept of a nation-state is fairly recent and perhaps only an anomaly in the history of civilizations, even more so given Singapore’s short history. This desire for self-determination should be manifested in Singaporeans, to the point where they are willing to trade treasure, comfort, convenience, and ultimately blood in the defense of this piece of geography, instead of capitulating to the will of another state. An extension of this assumption will then follow that political commitment for defense also remains strong. This commitment will be manifested in the government’s ability to enact tough but necessary policies, such as what they had done so with universal conscription and prioritization of defense resources.

Second and related, that the economy remains strong and continues to grow. While an aging population will inevitably require increased social spending, the assumption is that defense spending would not experience sharp cuts as long as the

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<sup>3</sup> NSmen are required to participate in annual training and mobilization exercises.

economy continues on its upward projection, albeit at a modest pace. This implies that while the need for prudence will be a consideration, as per always, it is not expected to be drastically more important than current levels today. Tangibly, this means that the proportion of the government budget set aside for defense is assumed to remain fairly constant.

The projected future upon which this scenario is based on will be set about 15-20 years ahead. At this point, the size of the conscript intake can be predicted fairly accurately based on birth data today, and is far along enough to allow for structural changes and for current emerging technologies to have matured. By then too, the Singaporean population would have undergone a generational refresh. Almost everyone would have been born after Singapore's tumultuous independence years, and thus would have little personal association with the founding fathers' considerations for NS. While these considerations would likely still have some indelible imprint on society, they may not be regarded as sacrosanct anymore.

Another important assumption is that the current rules-based international order is still intact. Being established by the U.S. after the Second World War, this postwar liberal order has allowed small states to flourish, allowing them to pursue their aims relatively unpressured from larger states. Globalization is a product of this, from which Singapore and many other small nations have benefitted tremendously under. Having no natural resources, Singapore relies heavily on international trade, investments and foreign labor, and has one of the most open market in the world. International organizations also provide small nations such as Singapore a voice and, more importantly, a vote, which may otherwise be denied in an alternative world order where the strong do what they can

and the weak suffer what they must. Although recent events in U.S. and Europe seem to suggest that globalization is in retreat and a Western decline, it will be assumed that the current rules-based liberal order will continue, even if alternative captains take control of the ship.

Lastly, while noting that Singapore's security interests hinges also on other stakeholders such as foreign affairs, social and economic security, this thesis will focus solely on the Ministry of Defense's responsibilities, with specific emphasis on the role of conscription. Even within the armed forces, it is noted that there will be multiple levers available along the range of Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, and Policy (DOTMLPF-P). To provide focus in this study, the variable of Organization, relating to conscription, will be assumed to be the primary driving force, to which the other DoTMLPF-P efforts will be secondary.

#### Pre-Research Position (R1)

To conduct a balanced and research-informed analysis, it will be sensible to acknowledge upfront the author's personal biases. As one who had invested the last decade or so of his life understanding, improving, and defending the existing system, the author is naturally inclined towards retaining the current conscription model, if anything out of parochialism. Though it would appear traitorous for him to propose any alternative other than the current model, the author is willing to have an open mind for the sake of research and weigh other options against the status quo, with the ultimate goal of enhancing the security of Singapore.



## Scope of Thesis

Having provided the broad impetus for this study, the subsequent chapters will attempt to help the reader better understand the situation, before proposing solutions informed by research and refined through analysis.

Chapter 2 will review relevant literature that can help to frame the problem and suggest possible solutions, guided by the sub-research questions: (1) what purposes does conscription serve; (2) what are the possible future scenarios that challenge the status quo; (3) what is the experience of other countries with conscription; and (4) how does Singapore's context determine the optimal way forward?

Chapter 3 will focus on the methodology of the research and will first identify relevant problem solving tools, both from the military and civilian business management domain, before synthesizing them to produce a unified framework tailored for this particular issue.

Chapter 4 will focus on solution development and analysis, integrating the results from the literature review in Chapter 2 with an analysis framework from Chapter 3. After determining the broad range of Organization solutions, other supporting efforts across the DoTMLPF-P domains will be considered and analyzed for suitability, feasibility, and acceptability.

Chapter 5 will present the conclusions from the study, suggesting possible implementation strategies, lessons learned, and areas for further study.

## CHAPTER 2

### LITERATURE REVIEW

This chapter will provide the basis to answering the research question and the component sub-questions. First, the general arguments on conscription by leading theorists will be examined. This will scope the key focus areas for which the rest of the literature review should include. Second, case studies on similarly placed countries will be examined, to understand how conscription has or has not served its purpose for these countries, and also how they have capitalized or mitigated the advantages and disadvantages of conscription as earlier discussed. Third, a strategic estimate of Singapore will be discussed, to understand its history with conscription and its unique context which needs to be considered in the solutioning. Fourth, the potential drivers of change that may challenge the status quo will be studied, to understand how they would affect a country's decision to have a conscript army or not. Finally, the concept of deterrence, being a central consideration in this issue, will be explored.

#### General Arguments on Conscription

The compulsory enlistment of citizens into military service is not a new concept. Historians have observed that some form of conscription had been used as far back as the Babylonian Empire in its conquest of the states in the ancient Near East.<sup>4</sup> However, the modern system that we are more familiar with today dates from the French Revolution in

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<sup>4</sup> Dietz O. Edzard, "History of Mesopotamia," Encyclopedia Britannica, accessed 10 February 2019, <https://www.britannica.com/place/Mesopotamia-historical-region-Asia>.

1792, where the harnessing of nationalistic passions gave birth to the levee en masse which was fundamental to Napoleon's near-complete domination of Europe.<sup>5</sup> Conscription enabled massed armies which increased a country's military strength drastically beyond what had been achievable through volunteers. Naturally, it was adopted by other countries quickly, and war soon evolved from limited engagements into total war, as demonstrated in the two World Wars. After the end of the Cold War, many countries took advantage of the peace dividend and dismantled their costly conscript armies, reverting to volunteer forces instead, while some continued to see value in conscription. There is hence significant debate on conscription, of which the key points of proponents and opponents are summarized below. While most of these arguments center around the U.S. experience, they remain generally useful for broad understanding.

#### Advantages

First and foremost, conscription allows sizeable manpower requirements to be met in a quick and relatively cheap manner. Eliot A. Cohen noted that this was especially pertinent for countries which share land borders or narrow straits with potentially hostile and comparatively larger neighbors.<sup>6</sup> In such cases, their ability to raise large standing armies quickly would be critical to reduce or even negate entirely the advantages that richer and more populous countries normally enjoyed. This was demonstrated by Israel

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<sup>5</sup> MacGregor Knox, "Mass Politics and Nationalism as Military Revolution: The French Revolution and After," in *The Dynamics of Military Revolution 1300-2050*, eds. MacGregor Knox and Williamson Murray (Cambridge, UK: Cambridge University Press, 2001), 57-73.

<sup>6</sup> Eliot A. Cohen. "Constraints: Necessity and Choice," in *Citizens & Soldiers: The Dilemmas of Military Service* (New York: Cornell University Press, 1985), 26.

during the Arab-Israeli wars where it was able to in a few days mobilize 450,000 troops, approximately the same number of troops that Egypt had, despite having a population of only four million compared to Egypt's forty-two million. While this advantage is most relevant to small countries, larger powers can benefit from conscription too. GEN(Ret) Peter Chiarelli, highlighted the efficacy of the Selective Service draft with which the U.S. Army used to grow rapidly from three hundred thousand to eight million soldiers within three years between 1942 and 1945.<sup>7</sup> In comparison, during his tour as Vice Chief of Staff of the U.S. Army during the Iraq War, the all-volunteer army only managed to increase by 17,000 troops in a similar three-year period. Notwithstanding that the operational requirements and scale for both campaigns were vastly different, the sheer potential of the conscription system to expand that rapidly is noteworthy. Instead of imposing an obligation on its citizens, volunteer armies rely on citizens choosing to join and hence opens the recruitment process to free market forces. As Charles Moskos observed, the U.S. Army's shift from the draft to the All-Volunteer Force (AVF) changed the nature of military service from being one of a calling to an occupation that in turn required military compensation to compete with civilian occupations.<sup>8</sup> Such a market-oriented, econometric approach changed the demographics of its recruits. Moskos noted a decline in mental aptitude in military entrants, and observed that "pay motivates less

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<sup>7</sup> Peter Chiarelli, "Building Trust through Character and Ethics" (lecture, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 6 November 2018).

<sup>8</sup> Charles C. Moskos, "The All-Volunteer Military: Calling, Profession, or Occupation?" *Parameters* 7, no. 1 (1977): 5.

qualified youth to join the armed services more than it did college-bound youth”,<sup>9</sup> and that the “college-educated enlisted man has virtually disappeared.”<sup>10</sup> Thomas W. Ross examined the theory of relative costs between voluntarism and conscription and how it would affect a country’s decision to choose between the two.<sup>11</sup> He notes that while conscription tends to incur higher relative costs due to conscripts having higher opportunity costs and poorer motivation than volunteers, this trend tapers off as the numbers increase. Conscription becomes highly cost efficient as a model in the case where a large military force is required.

Second, a conscripted army is considered to be more representative of society in character than a volunteer force. In a society where socio-economic levels are not distributed equally amongst the different racial groups, the reliance on free market forces results in the military being an unrepresentative slice of society. Moskos observed that the U.S. AVF recruited disproportionately more minorities and fewer white soldiers into the enlisted ranks, while this inverse was observed in the Officer corps. Education levels of soldiers were also disproportionate with respect to each racial group. Moskos noted that while it was not absolutely necessary for the makeup of the military to mirror the composition of the larger society, the potential social ramifications of a society’s

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<sup>9</sup> Charles C. Moskos, “Making the All-Volunteer Force Work: A National Service Approach,” *Foreign Affairs* 60, no. 1 (Fall 1981): 23.

<sup>10</sup> *Ibid.*, 18.

<sup>11</sup> Thomas W. Ross, “Raising an Army: A Positive Theory of Military Recruitment,” *Journal of Law and Economics*, no. 37 (April 1994): 109-131.

privileged being noticeably absent in its military should be considered.<sup>12</sup> That all-volunteer armies tend to involve a much smaller proportion of citizens compared to conscript armies also has implications in civil-military relations. GEN (Ret) Chiarelli suggested that the shift to the AVF separated the “American America from its armed forces” and that society-at-large was now more detached from its military despite it having been fighting in its longest war yet. He alluded to the reason being that less than 1 percent of its population had been involved in this ongoing conflict, in contrast to the 11 percent who fought in the Second World War when the draft was in effect.<sup>13</sup> A civil-military divide has implications not just to society but also policymaking. William A. Galston noted that the proportion of elected officials in Congress with military experience declined sharply following the abolition of the draft in the U.S., at a point falling lower than that of the general public.<sup>14</sup> While this would not necessarily mean greater hostility towards the military, it reflected ignorance of the nature of military service, as well as “diminished capacity and confidence to assess critically the claims that military leaders make.”

Third, conscription is seen as useful for the inculcation of desirable values and skills in the younger generation that ultimately benefit society as a whole. In his 1783 *Sentiments on a Peace Establishment*, George Washington articulated the mutual relation

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<sup>12</sup> Moskos, “Making the All-Volunteer Force Work: A National Service Approach,” 19-20.

<sup>13</sup> Chiarelli, “Building Trust through Character and Ethics.”

<sup>14</sup> William A. Galston, “Thinking about the Draft,” *Public Interest* 154 (Winter 2004): 63.

between citizenship and military obligation, that “every Citizen who enjoys the protection of a free Government, owes not only a proportion of his property, but even of this personal services to the defence of it.”<sup>15</sup> Galston argued that the shift to the AVF changed the notion of citizenship, where citizen rights could be obtained without personal responsibilities, or by simply allowing others to do the public work on their behalf.<sup>16</sup> This has in turn given rise to a highly individualistic culture in contemporary America. Young adults were observed to be supportive of the war in Iraq (with more than 70 percent in favor) but were equally as reluctant to participate themselves. Conscription also has the effect of being a melting pot, to build cohesion in an otherwise fragmented society. Henrik Jedig Jorgensen and Henrik O. Breitenbauch observed that by “mixing groups of the population from various parts of the country and exposing them to external pressure in the form of missing their homes, families and jobs and subjecting them to military discipline, side benefits have arisen in the form of an emerging spirit of solidarity across traditional local anchoring.”<sup>17</sup> In addition to mixing the different classes of society together, Moskos observed conscription’s role as a social leveler while the U.S. draft was in effect. Military service had a remedial effect on youths from the lower socioeconomic classes due to its association with positive ideals, such as “national defense, patriotism, citizenship obligation, even manly honor,” which then served to “resocialize poverty

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<sup>15</sup> George Washington, “Sentiments on a Peace Establishment,” National Archives, 1 May 1783, accessed 10 February 2019, <https://founders.archives.gov/documents/Washington/99-01-02-11202>.

<sup>16</sup> Galston, “Thinking about the Draft,” 62.

<sup>17</sup> Henrik Jedig Jorgensen and Henrik O. Breitenbauch, *What if We Gave Up Conscription?* (Denmark: Danish Institute for Military Studies, February 2009), 12.

youth towards productive ends.”<sup>18</sup> Apart from inculcating civic values, military service impresses on soldiers traits that are relevant and beneficial to society, such as discipline, resilience, and problem-solving skills. Dan Senor and Saul Singer describe how Israel’s mandatory draft has been a key factor in fostering an innovative and entrepreneurial workforce.<sup>19</sup> This military socialization process, as termed by Ori Swed and John S. Butler, cultivates not just new skills, but also social networks, and social codes of behavior which are subsequently exported by veterans to the civil-sphere, enabling industries, especially the high technology sector, to flourish.

Fourth, conscription as an institution stabilizes young democracies. In addition to the abovementioned benefits of conscription as a method of inculcating nation building values, Antonis Adam argues that conscript armies are the preferable option for young democracies as they are less predisposed than volunteer armies to overthrow the government through military coups.<sup>20</sup> Conscript armies are inherently less effective in the use of violence based on the inherent fact that they have less training, higher turnover, and generally less motivation. In addition, conscripts’ preference for public policy tend to align closer to the civilian population than the military establishment, and given that the general public tends to suffer higher welfare losses from such endeavors, conscript

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<sup>18</sup> Moskos, “Making the All-Volunteer Force Work: A National Service Approach,” 20.

<sup>19</sup> Dan Senor and Saul Singer, “Harvard, Princeton, and Yale” in *Start-Up Nation: The Story of Israel’s Economic Miracle* (New York: Twelve Grand Central Publishing, 2011), 67-83.

<sup>20</sup> Antonis Adam, “Military Conscription as a Means of Stabilizing Democratic Regimes,” *Public Choice* 150, no. 3/4 (March 2012): 715-730.



armies have lower incentive to participate in coups. Thus he argues that fledging democratic governments would be expected to introduce conscription to limit the power of the military so as to stabilize their regimes. As the democracy becomes established, conscription may be abolished in favor of an alternative system that is more efficient in increasing the military's capabilities.

Fifth, conscription and the inherent expanded involvement of society in military affairs may discourage foreign policy adventurism. Jorgensen asserts that conscription ensures greater transparency of the armed forces with regard to the public, and provides guarantee for democratic control. In the same vein, Joseph P Vasquez III argues that democracies with primarily conscript forces have greater domestic sensitivity to combat casualties, compared to democracies with primarily volunteers, which hence constrains risky adventurism.<sup>21</sup> Adrian R. Lewis noted that the end of the U.S. draft in 1973 effectively removed the American people from the fighting, but did not reduce the military's involvement in overseas engagements.<sup>22</sup> Instead, he argues that with the American people removed from the equation, there was less risk of antiwar movements as experienced by the Johnson and Nixon administration which made it easier to go to war. Andrew J. Bacevich noted that the replacement of the citizen-soldier tradition with a large professional standing army, saw the transformation of attitudes towards war, from

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<sup>21</sup> Joseph Paul Vasquez III, "Shouldering the Soldiering: Democracy, Conscription and Military Casualties," *The Journal of Conflict Resolution* 49, no. 6 (December 2005): 870.

<sup>22</sup> Adrian R. Lewis, "Conscription, the Republic, and America's Future," *Military Review* 89, no. 6 (November/December 2009): 16.

being a “sometime thing” to becoming an “anytime thing.”<sup>23</sup> The large standing army, having lost its traditional negative connotations, was developed into an invincible offensive force to help America win any political argument.<sup>24</sup>

### Disadvantages

One of the popular arguments against conscription is that a conscript army is inherently poorer in quality as compared to a volunteer army. Doug Bandow puts forward several factors why this may be so.<sup>25</sup> First, volunteer armies have the luxury to choose their recruits. This allows them to set entry standards, for example education levels or general aptitude, to ensure that all recruits meet a certain base level of quality. While some amount of remuneration may be required to attract the quantity required, volunteer recruitment nevertheless remains a more dependable method to ensure quality, as compared to conscription which will more than likely be required to enlist a wider spectrum of society in order to be equitable. Also, a volunteer army has the ability to discharge soldiers who subsequently fall short of the required standards, while a conscript army will be forced to retain them regardless, lest deliberate indiscipline becomes a viable means to escape military service. Second, as conscripts generally do not choose to join the military in the absence of compulsion, it follows then that they are likely to possess weaker motivation and generally a lower aptitude for military service, as

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<sup>23</sup> Andrew J. Bacevich, “Whose Army?” *Daedalus* 140, no. 3 (Summer 2011): 125.

<sup>24</sup> *Ibid.*, 131.

<sup>25</sup> Doug Bandow, *Fixing What Ain't Broke: The Renewed Call for Conscription*, Cato Institute Policy Analysis 351 (Washington, DC: Cato Institute, August 1999), 6-8.

compared to a volunteer who willfully chose to serve. With the assumption that these factors contribute directly to combat effectiveness, Bandow argues that “all phases of military life are transformed for the better when the armed forces are made up of people who join voluntarily and desire to succeed.” Third, a conscript army will generally experience higher turnover rates due to conscripts generally having shorter military service liability as compared to career-oriented volunteers. The high churn and need for repetitive basic training will likely result in a less experienced, less stable and less efficient military. In addition to conscript armies being of lesser quality, Bandow also refutes the relevance of large armies, which are the hallmark of conscription, on the modern battlefield.<sup>26</sup> The lethality of weapons has increased significantly and coupled with joint warfighting concepts have increased the efficiency of combat. He argues that in a conventional war, the massed army would serve limited value only as cannon fodder given the killing potential of well-trained soldiers using the latest technology. Quality of troops is hence more relevant than quantity on the modern battlefield, to which conscription is less adept at delivering.

Second, while conscription is recognized as a potential means to instill citizenship values in a nation, it may be seen as a discriminatory tax and result in perceived inequity amongst its citizens. From the economic perspective, Peter Berck states that conscription imposes a discriminatory tax on recruits equal to the difference between their market

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<sup>26</sup> Doug Bandow, *Fighting the War against Terrorism: Elite Forces Yes; Conscripts No*, Cato Institute Policy Analysis 430 (Washington, DC: Cato Institute, April 2002), 2.

wages and the below-market military wage that they receive.<sup>27</sup> Bandow argues that this is further aggravated when conscription is not imposed universally, as usually the case be it through a lottery or selection, being grossly unfair to those “unlucky” to be drafted while the majority of their compatriots carry on their lives undisturbed. Ronald R. Krebs adds that unequal application of conscription tends to result in draft dodging, which not only incurs cost and effort to prevent, but if successful further worsens the perceived inequity.<sup>28</sup> This was witnessed in the American Revolutionary War and the Civil War, where recruits would offer payments as commutation or hire replacements as substitution. This unequal burden led to widespread draft riots in 1863, worsened by racial tensions and perceived discrimination against the poor. During the Vietnam War, Bandow noted that an entire opposition industry was even established for the avoidance of the draft, which facilitated “emigration, early marriages, unnecessary schooling, inefficient employment, and political violence.”<sup>29</sup>

On the other hand, while universal application of conscription will make it more equitable, it will also introduce inefficiencies. Bandow notes that there while such a system will be fair, it will require significant administration to implement and maintain

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<sup>27</sup> Peter Berck and Jonathan Lipow, “Military Conscription and the (Socially) Optimal Number of Boots on the Ground,” *Southern Economic Journal* 78, no. 1 (July 2011): 95.

<sup>28</sup> Ronald R. Krebs, “The Enduring Citizen-Soldier Tradition in the United States,” in *The New Citizen Armies: Israel’s Armed Forces in Comparative Perspective*, ed. Stuart A. Cohen (London: Routledge, 2015), 10-11.

<sup>29</sup> Bandow, *Fixing What Ain’t Broke: The Renewed Call for Conscription*, 10.

it.<sup>30</sup> Such an unwieldy bureaucracy would not likely promote inexpensive and innovative ways in its operation. Krebs adds that efforts would also need to be invested to counter draft dodging, which would be significant during unpopular wars, as in the U.S. experience during the Vietnam War.<sup>31</sup> Bandow also argues that with the abundance of manpower, militaries will make less effort to ensure productive employment of each individual, citing Israel's military as an example as having "a bloated officer corps as well as an under trained and unready army in which many conscripts have no real jobs."<sup>32</sup> To curb the excess, some have suggested civilian service as an additional avenue for conscripted youths. Moskos suggests that such civilian service could be directed towards "tasks which intrinsically cannot be filled through sheer monetary incentives; for example, caring for the aged, infirm, and mentally feeble; and performing conservation work."<sup>33</sup> Bandow however views that such a move would be akin to "treat[ing] constitutional liberties with criminal contempt," and could also "degrade military effectiveness either by creating competition for quality recruits or by overloading the services with unnecessary personnel." Quoting Philip Gold, a history professor at Georgetown University, mandatory civilian service would be "utterly pernicious, not only

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<sup>30</sup> Doug Bandow, *National Service: Utopias Revisited*, Cato Institute Policy Analysis 190 (Washington, DC: Cato Institute, March 1993), 6.

<sup>31</sup> Ronald R. Krebs, "Myths of the All-Volunteer Force: Rethinking Military Recruitment and the Fate of the Citizen-Soldier" (conference paper on "Citizenship, the Soldier, and the State), accessed 10 February 2019, [http://users.polisci.umn.edu/~ronkrebs/Publications/Myths%20of%20the%20AVF%20\(complete\).pdf](http://users.polisci.umn.edu/~ronkrebs/Publications/Myths%20of%20the%20AVF%20(complete).pdf).

<sup>32</sup> Bandow, *Fixing What Ain't Broke: The Renewed Call for Conscription*, 13.

<sup>33</sup> Moskos, "The All-Volunteer Military: Calling, Profession, or Occupation?" 30.

in its desire to insure equity by spreading hardship, but also for its attempt to use conscription for social engineering. If the military claim is to have any validity, it must remain unique.”<sup>34</sup>

While personnel costs in a conscript army are generally lower than a volunteer army, conscription incurs significant hidden costs on society. Ross notes that in conscripting an individual from the civilian labor force, the economy loses both the civilian (marginal) product and the civilian wages that he would have received.<sup>35</sup> In addition, there may be an added disutility cost to the conscript if he has a “distaste for military employment relative to civilian employment.” Berck suggests these costs could be represented in a term he introduces as the individual’s marginal value product, which is a reflection of an individual’s market value and wage that he could possibly command in a competitive private sector.<sup>36</sup> In a socially optimal scenario, only individuals whose marginal value product equaled the military wage should be enlisted into the military. However, an individual’s marginal value product is intangible, comprising private information possibly known only to the individual, and thus not easily observed by the government. As such, conscript armies, in drafting recruits at random, tend to conscript individuals with higher marginal value product than the military wage, and are thus not socially optimal.<sup>37</sup> However, he adds that all-volunteer forces are also not socially

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<sup>34</sup> Bandow, *Fixing What Ain’t Broke: The Renewed Call for Conscription*, 13.

<sup>35</sup> Ross, “Raising an Army: A Positive Theory of Military Recruitment,” 113.

<sup>36</sup> Berck, “Military Conscription and the (Socially) Optimal Number of Boots on the Ground,” 97.

<sup>37</sup> *Ibid.*, 100.

optimal, as they tend to attract individuals whose marginal value product is less than the military wage. All-volunteer forces also tend to require greater taxation to fund the higher wage bill which leads to greater deadweight loss.<sup>38</sup> To minimize the social cost for conscript armies, Berck proposes that individuals with high marginal value product should be exempted from conscription.<sup>39</sup> This can take the form of offering draft exemptions or deferments to individuals who are accepted into high-quality institutions of higher education, such as what was practiced in the U.S. during the Vietnam War, and is being practiced today in Russia, South Korea, and Israel. For all-volunteer forces, the disparity may be mitigated either by offering higher wages to higher quality volunteers, or by providing additional benefits that only benefit the college bound, for example initiatives such as the U.S.' G.I. Bill and Army College Fund.<sup>40</sup> Berck also proposes an additional measure to combine volunteers with conscripts and offer volunteers a higher wage than offered to conscripts.<sup>41</sup> This differential system of wages allows wages for both conscripts and volunteers to be lowered without significant detriment to recruitment, and thus reduces the deadweight losses associated with taxation.

Lastly, while conscript armies may discourage foreign policy adventurism, they may encourage battlefield tactics that have a propensity for higher casualties. This was first demonstrated in Napoleonic France. MacGregor Knox wrote that the levee en masse

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<sup>38</sup> Berck, "Military Conscription and the (Socially) Optimal Number of Boots on the Ground," 100.

<sup>39</sup> *Ibid.*, 102.

<sup>40</sup> *Ibid.*, 101.

<sup>41</sup> *Ibid.*, 102.

enabled Napoleon to employ his infantry troops lavishly without tactical subtlety, and that while the Grand Armee suffered significant number of casualties, it could still fight on a scale that no other eighteen-century army could match.<sup>42</sup> Bandow adds that conscription provided the North in the U.S. Civil War and most countries in the First World War essentially endless supplies of manpower which allowed the conduct of bloody wars of attrition.<sup>43</sup> Whether conscription was the cause or effect of such bloody battlefield tactics is debatable. However, it is argued that a nation's type of military service certainly does influence its battlefield tactics. British Prime Minister David Lloyd George was quoted in reference to the First World War that the "reckless wastage of the manpower so lavishly placed at [the generals'] disposal also vitiated their judgement."<sup>44</sup> Moskos argues a nation would be more acceptable of high combat casualties only if national interests are at stake and that the consideration of what was indeed national interest depended not only on the cause itself, but also on the people who were willing to die for the cause.<sup>45</sup> Conscription, engendering a more socially representative army than voluntarism especially in the enlistment of the upper classes, would thus lead to greater public acceptance of war losses. As an example, he suggests that the American public was more accepting of the casualties during the Second World War as compared to the

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<sup>42</sup> Williamson Murray and MacGregor Knox, "Thinking about Revolutions in Warfare" in *The Dynamics of Military Revolution: 1300-2050* (Cambridge, UK: Cambridge University Press, 1996), 8.

<sup>43</sup> Bandow, *Fixing What Ain't Broke: The Renewed Call for Conscription*, 9.

<sup>44</sup> Ibid.

<sup>45</sup> Charles C. Moskos, "Reviving the Citizen Soldier," *National Affairs*, no. 39 (Spring 2002): 85.



Vietnam War, even though the casualties from the former were ten times more than in the latter, due to the much narrower social base from which the Vietnam-era draft was based on.<sup>46</sup>

### Case Studies

This section focuses on other similarly placed countries to understand their experience with military conscription and the reasons behind the adoption or abandonment of it. These three countries are similar to Singapore in the sense that they are relatively young and small democratic states, sharing borders with larger regional neighbors, and rely on deterrence as a significant component of their security strategy.

#### Israel

Israel is a small country of 8,000 square miles with a population of 8.7 million, and is located between the Arab States of Egypt, Jordan, Lebanon and Syria, having been carved out through force from British-controlled Palestine. Understandably so, Israel faces long-standing hostility from its neighbors and has engaged in many conflicts with them. As the backbone of its defense, the Israel Defense Force is viewed as a prime example of a “people’s army” that is battle-tested and effective, having a system of military service based on universal conscription for all 18-year-old men and women for two to three years, and compulsory reserve duties (principally for males) until middle age. It is a hybrid structure, consisting of conscripts, reservists and a core cadre of salaried professionals.

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<sup>46</sup> Moskos, “Reviving the Citizen Soldier,” 85.

Conscription in Israel has its origins in the Arab-Israeli War between 1948 and 1949, also known as Israel's War of Independence, and was established by David Ben-Gurion, founder of the State of Israel, based on two material considerations. First, there was a need to raise a large enough army to engage and defeat the invading army amassed by its Arab neighbors.<sup>47</sup> Second, it had to achieve so while keeping financial costs modest and retaining a large industrial workforce to sustain its fledging economy.<sup>48</sup> These considerations made the option of expanding its principal pre-State underground militia *Haganah* into an all-volunteer force impractical. The affordable model of a Swiss-style militia was also considered but not accepted on the basis that it could not guarantee the standards of military proficiency that Israel would require in its high intensity conflict.<sup>49</sup>

After the war in 1949, several factors arose to pressure the dismantling of conscription. Economically, it was not sustainable to maintain the large standing force which mobilized over 30 percent of Israel's workforce at the height of the war, and massive demobilization was required.<sup>50</sup> Socially, the end of the war saw large arrivals of immigrants, half of whom were Holocaust survivors from Europe and the remainder mainly refugees from Arab countries. Conscription of these immigrants into the army

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<sup>47</sup> Stuart A. Cohen, "Reversing the Tide of Jewish History," in *The New Citizen Armies: Israel's Armed Forces in Comparative Perspective* (London: Routledge, 2015), 56.

<sup>48</sup> *Ibid.*

<sup>49</sup> *Ibid.*

<sup>50</sup> *Ibid.*, 57.

would prove difficult due to their backgrounds, leading to challenges in communication, low morale, and indiscipline in the force.<sup>51</sup> These factors affected the IDF's operational standards, and pressured Ben-Gurion to establish an elite fighting force comprising almost entirely of sabras, native residents of kibbutzim, to conduct future reprisal operations.<sup>52</sup> Culturally, sustaining its conscript force was challenging as well, as the Israeli society did not have a natural martial ethos, after having spent almost 2,000 years as a disparate non-combative people. Non-belligerency had become prevalent in traditional Jewish practice, with "war" being seen as an allegorical concept denoting not armed combat but an intellectual confrontation over the correct interpretation of Scriptures. The Bible was itself "subjected to a process of re-interpretation, whereby its tales of martial valor and heroism were deliberately divested of their plain meanings."<sup>53</sup>

Despite these challenges, conscription and the format of a "people's army" was retained. The primary reason was that "nothing short of universal conscription could possibly balance the fundamental demographic asymmetries between the IDF and its Arab foes, potential as well as present."<sup>54</sup> Scholars however also have the alternative view that Ben-Gurion was determined to retain the universal draft in part of its effect in diminishing the influence of left-wing *Mapam* opposition and serving the political

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<sup>51</sup> Cohen, "Reversing the Tide of Jewish History," 57.

<sup>52</sup> *Ibid.*, 58.

<sup>53</sup> *Ibid.*, 60.

<sup>54</sup> *Ibid.*, 58.

interests of his own more moderately socialist *Mapai* party.<sup>55</sup> Conscription has also been assessed to have had cultural significance, where the armed forces was not merely designed to provide security but also “supposed to carry out the even more difficult task of reconstructing the inner worlds of its Jewish citizens and – through mass conscription – of overthrowing an attitude of aversion to matters military that was widely considered to constitute an integral component of Jewry’s collective culture.”<sup>56</sup> The IDF, in Ben-Gurion’s conception, would “serve not only as a military training apparatus but also as a state school that imbues the youth entering its ranks with knowledge of the language, the country, Jewish history, the fundamentals of general education, neatness and order, and most importantly, love of the homeland.”<sup>57</sup>

Today, this “people’s army” generally still enjoys domestic support. However, scholar Reuven Gal argues that while the level of motivation for enlistment into the IDF has not changed quantitatively over the years, its makeup and profile has undergone significant changes that in many ways reflect the transformation of Israeli society.<sup>58</sup> He posits that this evolution can be categorized into four main periods, the first being the initial two decades of statehood, where motivation was based on the need for survival of

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<sup>55</sup> *Ibid.*, 59.

<sup>56</sup> Cohen, “Reversing the Tide of Jewish History,” 59.

<sup>57</sup> David Ben Gurion, *The Eternity of Israel* (Tel Aviv, Israel: Ayanot), 158, quoted in Meir Elran and Gabi Sheffer, eds. *Military Service in Israel: Challenges and Ramifications* (Tel Aviv, Israel: Institute for National Security Studies, 2016), 54.

<sup>58</sup> Reuven Gal, “Motivation Levels for IDF Enlistment over the Years,” in *Military Service in Israel: Challenges and Ramifications*, eds. Meir Elran and Gabi Sheffer (Tel Aviv, Israel: Institute for National Security Studies, 2016), 58.

the fledging state and the national identity.<sup>59</sup> The second period began around the time of Six Day War and also lasted about two decades. By this time, conscription had become customary and normative, and individuals would have been motivated by social pressure.<sup>60</sup> The third began with the first intifada in the late 1980s and lasted until the Second Lebanon War in 2006. During this time, Israeli society had grown “increasingly utilitarian and individualistic, as did the primary motivation for youth to enlist in the military.” Military service by then had gained a reputation of being beneficial to individuals in their future civilian lives, especially service in some “intellectual” units which exposed recruits to critical thinking challenges in an environment of sophisticated computers systems. Service in such units was of material benefit for soldiers eager to join the rapidly developing hi-tech industry in Israel. The IDF understood this trend and introduced a plethora of initiatives, such as marketing such valued opportunities, offering differential salaries, unionized reserve soldiers, and opened up more positions to women.<sup>61</sup> The fourth and final period covers the last decade from the Second Lebanon War up to the present. Gal argues that today’s configuration is of a mixed nature, in addition to the significant individualistic motivation prevalent, there is also a return to ideological and survival motivation, particularly among youth from Zionist national-religious sectors.<sup>62</sup> He cautions that the increasing disparity in types of motivation carries

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<sup>59</sup> Ibid., 54.

<sup>60</sup> Gal, “Motivation Levels for IDF Enlistment over the Years,” 55.

<sup>61</sup> Ibid., 56.

<sup>62</sup> Ibid., 57.

potential risk of tension between different groups of soldiers, as these motivations at times can be contradictory or hostile to each other. He further argues that the “melting pot” and “state school” model, that Ben-Gurion originally envisaged the IDF to be, was under threat and being replaced by diverse, and at times, clashing attitudes towards the state.<sup>63</sup>

Gal’s study on the evolution of motivation parallels the growing discussion in Israeli society and suggests that the “people’s army” no longer exists. Avi Jager, writing for the *Jerusalem Post*, argues that universal conscription is now a myth given the growing demographic of those unwilling to serve.<sup>64</sup> While generally condemned in wider society, draft dodging remains a problem and especially exacerbated when committed by Israeli public figures for personal benefit without severe consequences.<sup>65</sup> In addition, the proportion of the population required to enlist is falling. The two groups that are exempt from mandatory military service, the ultra-Orthodox and Arab Israelis, constitute over 30 percent of the Israeli population today and with their significantly higher birth rate, are set to constitute around 60 percent of the population by 2050.<sup>66</sup> It is with this intent to stem the trend that Prime Minister Benjamin Netanyahu’s coalition government in 2018

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<sup>63</sup> Gal, “Motivation Levels for IDF Enlistment over the Years,” 58.

<sup>64</sup> Avi Jager, “The Myth of Compulsory Military Service in Israel,” *The Jerusalem Post*, 18 October 2018, accessed 29 January 2019, <https://www.jpost.com/Opinion/The-myth-of-compulsory-military-service-in-Israel-569779>.

<sup>65</sup> Toi Staff, “Bar Refaeli Hit Back at the Army,” *The Times of Israel*, 19 March 2013, accessed 29 January 2019, <https://www.timesofisrael.com/bar-refaeli-hits-back-at-the-army/>.

<sup>66</sup> Jager, “The Myth of Compulsory Military Service in Israel.”

tabled a controversial bill to require ultra-Orthodox men to serve, but at the time of this thesis' authoring, the matter has reached an impasse and has resulted in an early call for elections by April 2019 in order to resolve this deeply divisive issue.<sup>67</sup>

## Taiwan

The island of Taiwan is situated to the southeast of mainland China, separated by the 180-kilometre-wide Taiwan Straits. The Chinese Civil War lasting from 1927 to 1950 resulted in a decisive victory for Mao Zedong's Chinese Communist Party and saw Generalissimo Chiang Kai-shek's Kuomintang (KMT) government retreating to the island of Taiwan. Since then, there have been tensions between Taiwan and the People's Republic of China (PRC) regarding the sovereign status of Taiwan. While the PRC views Taiwan as a renegade province to be politically subjugated, by force if necessary, as part of its "One China" policy,<sup>68</sup> people on Taiwan increasingly identify themselves as being Taiwanese, not Chinese.<sup>69</sup> Initially recognized and backed by the U.S., Taiwan ceased to enjoy the security guaranteed by a mutual defense treaty that the U.S. rescinded in 1979 when it normalized diplomatic relations with the Beijing government and terminated

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<sup>67</sup> Raoul Wootliff, "Early Elections Called for April 9 as Coalition Agrees to Dissolve Knesset," *The Times of Israel*, 24 December 18, accessed 29 January 19, <https://www.timesofisrael.com/early-elections-called-for-april-9-as-coalition-agrees-to-dissolve-knesset/>.

<sup>68</sup> Ian Easton, Mark Stokes, Cortez A. Cooper, and Arthur Chan, *Transformation of Taiwan's Reserve Force* (Santa Monica, CA: RAND Corporation, 2017), 1.

<sup>69</sup> Rob Schmitz, "Born Independent. Taiwan's Defiant New Generation is Coming of Age," *National Public Radio*, 20 June 18, accessed 10 February 2019, <https://www.npr.org/2018/06/20/616083178/born-independent-taiwan-s-defiant-new-generation-is-coming-of-age>.

formal relations with Taiwan. As such, Taiwan has had to adopt an independent defense against China, relying on technological advantages to exploit China's shortcomings in force projection and a sizeable armed force enabled by universal conscription.<sup>70</sup>

However, many of these advantages have been eroding over time, prompting significant reforms in recent years with the intent to shift from a predominantly large conscript force to a smaller but more professional all-volunteer force.<sup>71</sup> The large conscript army, once the cornerstone of Taiwan's defense strategy, has been drastically reduced to less than half its size and plays a notably muted role today.<sup>72</sup>

Since 1949, Taiwan's military posture has undergone six stages of evolution.<sup>73</sup> In the beginning from 1949 to 1969, Generalissimo Chiang's KMT administration had an *Offensive Posture* with the strategic goal of recovering the mainland. As such, focus was placed on amphibious operations supported by offensive naval and air capabilities. From 1969 to 1979, with Taiwan's withdrawal from the United Nations in 1971, Taiwan adopted a posture of *Offense and Defense in One*, to dictate the strengthening of defensive capability. From 1979 to 2002, after Taiwan and U.S. severed diplomatic relations in 1979, Taiwan shifted away from its offensive posture to a strategy of *Resolute Defense and Effective Deterrence*. Force buildup prioritized defensive capabilities such as counter-air, sea control and anti-landing, with the operational intent

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<sup>70</sup> Easton, *Transformation of Taiwan's Reserve Force*, vii.

<sup>71</sup> *Ibid.*, viii.

<sup>72</sup> Republic of China Ministry of National Defense, *2017 National Defense Report* (Taipei City: Ministry of National Defense, 2017), 73.

<sup>73</sup> *Ibid.*, 66.



to wage “decisive battle at the water’s edge.”<sup>74</sup> From 2002 to 2009, under the independence-leaning Democratic Progressive Party administration, Taiwan’s posture adjusted to *Effective Deterrence and Resolute Defense*, with the prioritized development of pre-emptive measures such as long-range precision strike capabilities and strengthened air and naval forces, under President Chen Shui-bian’s idea of conducting “decisive operations outside the territory.”<sup>75</sup> From 2009 to 2017, this order was reversed back to the more conciliatory *Resolute Defense for Effective Deterrence* under President Ma Ying-jeou’s administration, with a new “Hard ROC” strategy focusing on fortification, rather than active defense,<sup>76</sup> to achieve the strategic objective of “war prevention.”<sup>77</sup> Since 2017, President Tsai Ing-wen’s administration has sought to preserve the status quo while keeping abreast with military modernization with the posture of *Resolute Defense, Multi-Domain Deterrence*, emphasizing a multi-domain approach in defense and deterrence. However, Tsai’s administration has notably been more strident in its separatist stance compared to its predecessor, most recently rejecting outright Chinese president Xi Jinping’s proposed “one country, two systems” concept.<sup>78</sup>

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<sup>74</sup> York W. Chen, “The Evolution of Taiwan’s Military Strategy: Convergence and Dissonance,” *China Brief* 9, no. 23 (19 November 2009): 8-12.

<sup>75</sup> *Ibid.*

<sup>76</sup> *Ibid.*

<sup>77</sup> Republic of China Ministry of Defense, *2017 National Defense Report*, 66.

<sup>78</sup> BBC, “Xi Jinping says Taiwan ‘must and will be reunited with China,’” 2 January 2019, accessed 10 February 2019, <https://www.bbc.com/news/world-asia-china-46733174>.

Conscription was instituted in 1947, providing an efficient means of establishing a large standing army quickly. During this era, military techniques were basic and the younger soldiers who were conscripted into the military could be proficiently trained during their two years of service.<sup>79</sup> Conscription also had the added benefit of creating a large corps of trained reserves, and was opportune in the inculcation of KMT Party ideology and “civil education.”<sup>80</sup> However in the 1960’s and 1970’s, militaries worldwide began to transit to all-volunteer forces, with the U.S. ending its program in 1973 after its unpopular experience in the Vietnam War. This had influence on Taiwan’s domestic populace as the conscription program came under increasing attack during the 1990s and 2000s for being irrelevant in modern warfare.<sup>81</sup> The draft also lost popular support as reports became frequent of conscripts faking mental illnesses, losing excessive weight and studying abroad to dodge the draft.<sup>82</sup> In response, Taiwan embarked on significant defense reforms in 1993 to streamline and enhance the effectiveness of its force structure with the object being one that was small (force size), sophisticated (high quality weapons) and strong (operational capability). Key to this strategy was the acquisition of high-tech weapons and equipment which the U.S. was obliged to provide under the 1979 Taiwan Relations Act. Arms sales from the U.S. rose exponentially from

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<sup>79</sup> Eric Setzekorn, “Military Reform in Taiwan: The Lafayette Scandal, National Defense Law and All-Volunteer Force,” *American Journal of Chinese Studies* 21, no. 7 (April 2014): 16.

<sup>80</sup> Ibid.

<sup>81</sup> Ibid.

<sup>82</sup> Ibid.

roughly \$900 million annually during the 1979-1982 period to \$4 billion in the early 2000s, enabling Taiwan to build up a formidable fleet that comprised state-of-the-art fighting systems, such as F-16 fighters, E-2T early warning aircraft, PAC-III air defense systems, Patriot anti-missile systems, Perry-class frigates, Arleigh Burke-class Aegis guided missile destroyers, M-60 main battle tanks and M-109A5 artillery, in sizeable numbers.<sup>83</sup> To afford this and cut costs, Taiwan sought to reduce the size of its armed forces, primarily the army. Through the 10-Year Force Build-up Program (1993-1996), Jing-shi Streamlining Program (1997-2001), Jing-jin Streamlining Program (2004-2010), and Jing-cui Refining Program (2011-2014), total force size decreased from over 490,000 to just 210,000,<sup>84</sup> with the eventual target to reduce the active-duty force to approximately 175,000 by 2019.<sup>85</sup> Furthermore, Taiwan, under President Ma's administration, announced in 2010 its plan to transit from a conscript force to an all-volunteer force by end of 2014.<sup>86</sup>

However, Taiwan's transition from a large primarily-conscript force to a lean but professional all-volunteer force is not without challenge. Recruitment for the all-volunteer force is increasingly difficult, due to declining birthrates, competition in the employment market, and heavier workloads due to the decline in conscripts.<sup>87</sup> In some

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<sup>83</sup> David Shambaugh, "A Matter of Time: Taiwan's Eroding Military Advantage," *The Washington Quarterly* 23, no. 2 (Spring 2000): 126.

<sup>84</sup> Republic of China Ministry of Defense, *2017 National Defense Report*, 72.

<sup>85</sup> Easton, *Transformation of Taiwan's Reserve Force*, 5.

<sup>86</sup> *Ibid.*

<sup>87</sup> Republic of China Ministry of Defense, *2017 National Defense Report*, 128.

instances, society's poor experience with conscription and cultural perceptions that "good men don't make soldiers; good iron doesn't make nails" contribute to this difficulty.<sup>88</sup> Certain segments of the Taiwanese population also doubt Taiwan's ability to effectively defend itself should China choose to invade, given the sheer overmatch of defense spending and capabilities.<sup>89</sup> As such, while the planned transition to the all-volunteer force has already resulted in a phased reduction of active-duty conscript service, the full abolition of conscription had been repeatedly postponed due to recruitment shortfalls, and possibly delayed indefinitely.<sup>90</sup> As per the current system, Taiwanese youth undergo four months of compulsory military training, a significant reduction from the original two years, after which they are organized and managed as reservists.<sup>91</sup> As reservists, they undergo five to seven days of training on a biennial basis, focusing on skills refresher training, shooting practice, combat training, team training and disaster prevention and relief.<sup>92</sup> While relatively short, this training system is able to generate and sustain a reserve strength of 2.5 million men, or approximately 15 percent of the population, which

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<sup>88</sup> Laura Dickey, "Taiwan's Struggle for All-Volunteer Force and the Civil-Military Divide," *TheNewsLens*, 6 March 2018, accessed 10 February 2019, <https://international.thenewslens.com/article/90840>.

<sup>89</sup> Yimou Lee, "For Taiwan's Youth, Military Service is a Hard Sell Despite China Tension," *Reuters*, 28 October 2018, accessed 10 February 2019, <https://www.reuters.com/article/us-taiwan-military-idUSKCN1N20U3>.

<sup>90</sup> Jason Pan, "All-Volunteer Military Plans Postponed," *Taipei Times*, 27 August 2015, accessed 10 February 2019, <https://taipeitimes.com/News/front/archives/2015/08/27/2003626274>.

<sup>91</sup> Republic of China Ministry of Defense, *2017 National Defense Report*, 95.

<sup>92</sup> *Ibid.*, 101.

can be mobilized to augment the active-duty force in the event of war.<sup>93</sup> As argued by Tanner Greer and Easton,<sup>94</sup> this large reservist force, when buttressed by the unique geography of dense cities, high mountains, and jungles, will be able to mount a significant guerilla-style defense, that when coupled with Taiwan's substantial anti-access area denial capabilities along the Taiwan Straits, will be effective even against a seemingly invincible Chinese attack.<sup>95</sup>

### Latvia

Latvia, occupying 25,000 square miles with a population of 1.9 million, is a comparatively small country in its region. Together with its Baltic neighbors, Estonia and Lithuania, they are NATO's eastern border with Russia, precariously positioned between Kaliningrad and Russia's close ally Belarus, with only a 60-mile-wide "Suwalki Gap" land link with the rest of Europe. Despite this looming threat, Latvia abolished its military conscription system in 2006, and has relied primarily on its NATO and EU membership for security, in contrast to its neighbors Estonia who has continued with universal male conscription and Lithuania who had similarly abolished conscription in 2008 but later reinstated it in 2015.

Latvia considers Russia to be its key security threat, a unanimous view similarly held by the other Baltic States, not just in view of its recent aggression in Ukraine and

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<sup>93</sup> Easton, *Transformation of Taiwan's Reserve Force*, 11-12.

<sup>94</sup> *Ibid.*, 42-44.

<sup>95</sup> Tanner Greer, "Taiwan Can Win a War with China," *Foreign Policy*, 25 September 2018, accessed 10 February 2019, <https://foreignpolicy.com/2018/09/25/taiwan-can-win-a-war-with-china>.

Georgia but also anchored in its long-standing history.<sup>96</sup> Having been conquered by Peter the Great in the early-18th century, Latvia had been part of the Russian empire up to the Great War, after which it enjoyed a 20-year hiatus before it was taken over once again by Soviet Union in the Second World War, only receiving independence at the end of the Cold War in 1991.<sup>97</sup> Under Soviet domination, the Baltic States suffered severe oppression, especially during the second occupation, with large numbers of the population deported and murdered.<sup>98</sup> Furthermore, the Baltic states have a greater cultural affinity to Western Europe, sharing similarities in religion, culture, language and economic policies that are distinctly different from Russia's.<sup>99</sup> As such, the Baltic States announced their intent to join NATO in 1995, and formally joined the Alliance and the European Union in 2004.<sup>100</sup>

Having limited means whilst sharing a 150-mile border with Russia, Latvia has arguably chosen to rely primarily on NATO for its national security. It has allowed its defense spending to decline, neglected to enact security sector reforms, and abolished conscription in 2006 leaving behind no sizeable territorial force capable of putting up the level of resistance that its neighbors Finland, Estonia or Lithuania hope to achieve

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<sup>96</sup> James S. Corum, *The Security Concerns of the Baltic States as NATO Allies*, The Letort Papers for Strategic Studies Institute (Carlisle, PA: U.S. Army War College, 2013), 17-18.

<sup>97</sup> *Ibid.*, 8-12.

<sup>98</sup> *Ibid.*, 10-12.

<sup>99</sup> *Ibid.*, 9.

<sup>100</sup> *Ibid.*, 29.

through conscription.<sup>101</sup> Since its membership of NATO, Latvia has refocused its armed forces from national defense to international operations<sup>102</sup> in support of NATO and the U.S., whose presence in Europe is considered as core to NATO's credibility.<sup>103</sup> To secure NATO's assurance, Latvia, as well as the other Baltic States, contributed troops to NATO and UN peace operations, announced its strong support for the U.S.-led coalition in Iraq even before joining NATO, and has also contributed forces to serve under the U.S. and coalition command in the Iraq War and Afghanistan.<sup>104</sup> As a signal of their commitment, it is worth noting that the three Baltic States come prepared for combat and have no caveats restricting their employment, unlike many other contributors.<sup>105</sup> To better meet its focus on international operations, the Latvian government began in 2002 to reform its armed forces. Given that conscripts were prohibited from being involved in international operations under the Latvian Constitution, conscription was deemed as irrelevant in favor of an all-volunteer force equipped with modern equipment and trained and organized to integrate closely with NATO.<sup>106</sup> Furthermore, support for conscription had been waning as the then-system was considered to be unjust because, despite its compulsory nature,

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<sup>101</sup> Christopher Coker, "NATO and Baltic Security," in *Baltic Sea Security: How can Allies and Partners meet the New Challenges in the Region?* (Denmark: University of Copenhagen), 11.

<sup>102</sup> Jorgensen, *What if We Gave Up Conscription?* 26.

<sup>103</sup> Corum, *The Security Concerns of the Baltic States as NATO Allies*, 31-32.

<sup>104</sup> *Ibid.*, 5.

<sup>105</sup> *Ibid.*

<sup>106</sup> Jorgensen, *What if We Gave Up Conscription?* 26.

the regulations permitting deferment of service were notably lax and few men were actually enlisted. In particular, most of the men who had managed to defer service were from the major cities, further fueling perceptions of inequity.<sup>107</sup> The proposal to abolish conscription was hence well received by the public and supported by all political parties.<sup>108</sup> With better training and equipment, the Latvian all-volunteer armed forces today is viewed positively with prestige within military circles and also by the public.<sup>109</sup>

However, Latvia's defense strategy comes with certain conditions. First, the cost to sustain this professional military has risen to five or six times as high as they were before conscription was abolished, in part due to the introduction of high-tech equipment and increased salaries, but also due to the need to live up to NATO requirements to spend 2 percent of the GDP on defense.<sup>110</sup> While this is considered most cost-effective in the long run compared to conscription,<sup>111</sup> it may not be as sustainable given Latvia's fragile economy due to a shrinking working population. Economic migration, coupled with low birth rates and high mortality rates, has contributed to a 18 percent decline in population, from 2.4 million in 2000 to 1.9 million today.<sup>112</sup> Second, there was public concern of the

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<sup>107</sup> Jorgensen, *What if We Gave Up Conscription?* 27.

<sup>108</sup> *Ibid.*, 46.

<sup>109</sup> *Ibid.*

<sup>110</sup> *Ibid.*

<sup>111</sup> *Ibid.*, 35.

<sup>112</sup> Gordon F. Sander, "Latvia, a Disappearing Nation," *Politico*, 7 January 2018, accessed 10 February 2019, <https://www.politico.eu/article/latvia-a-disappearing-nation-migration-population-decline/>.



discontinuation of the armed forces' role as the national institution for molding values and improving the physical ability in young people, and the possible weakening of civil-military relations. To mitigate this concern however, the Ministry of Defense has increased financial support for the youth corps "Jaunsardzes," a type of scouts' organization to support healthy interests in young people and keeping them away from crime. Having over 7,300 members, this corps is larger than the army, and its teachers are either professional soldiers or come from the National Guard. Third, the reliance on NATO for defense comes with responsibilities that Latvia is obliged to fulfil. Latvia is expected to play host to NATO exercises and host US rotational forces on a consistent basis.<sup>113</sup> To affirm its commitment to NATO and the U.S., Latvia will need to demonstrate its support for the advancement of US' foreign policy.<sup>114</sup> This may be challenging if it runs contrary to domestic support, as seen in its participation in the Iraq War despite public disapproval.<sup>115</sup> These commitments, as well as NATO's obligation to increase defense expenditure, is the price that Latvia will have to pay for its continued protection, failure which the U.S., under the Trump administration, has threatened to

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<sup>113</sup> Damon Wilson and Magnus Nordenman, *A US Strategy for Building Defense and Deterrence in the Baltic States*, Issue Brief (Washington, DC: Atlantic Council, June 2016), 2.

<sup>114</sup> *Ibid.*, 6.

<sup>115</sup> Andrew Higgins, "'New Europe' Is as Skeptical of Iraq War as 'Old Europe'," *Wall Street Journal*, 18 March 2003, accessed 10 February 2019, <https://www.wsj.com/articles/SB104793603897470700>.

withdraw from NATO.<sup>116</sup> Fourth, there is concern that NATO may be ineffective in face of the hybrid threat that Russia poses. In addition to its hard power used in the invasion of Georgia and Ukraine, Russia has demonstrated its preference and proficiency of non-linear tactics such as coercion and intimidation. Examples include the abduction of an Estonian intelligence officer from Estonian territory in 2014,<sup>117</sup> Russian Foreign Minister Sergey Lavrov's 2016 threat to use force against Sweden and Finland should they join NATO,<sup>118</sup> the Russian Ambassador's nuclear threats to Denmark if it joined U.S.' anti-ballistic missile program in 2015, and regular calls by Russian political analysts for pre-emptive occupation of Baltic States.<sup>119</sup> Doctrinally, NATO is ill-prepared to respond to these ambiguous challenges that do not qualify as armed attacks which would otherwise invoke a collective armed response under Article 5.<sup>120</sup> Furthermore, achieving consensus amongst NATO members would be challenging given its implications. While NATO has

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<sup>116</sup> Atlantic Council, "Trump Confirms He Threatened to Withdraw from NATO," 22 August 2018, accessed 10 February 2019, <https://www.atlanticcouncil.org/blogs/natosource/trump-confirms-he-threatened-to-withdraw-from-nato>.

<sup>117</sup> Shaun Walker, "Russia Jails Estonian Intelligence Officer Tallinn says was Abducted over Border," *The Guardian*, 19 August 2015, accessed 10 February 2019, <https://www.theguardian.com/world/2015/aug/19/russia-jails-estonian-police-officer-allegedly-abducted-border-eston-kohver>.

<sup>118</sup> Wilson and Nordenman, *A U.S. Strategy for Building Defense and Deterrence in the Baltic States*, 1.

<sup>119</sup> Coker, "NATO and Baltic Security," 12.

<sup>120</sup> *Ibid.*

announced that cyber-warfare would be introduced as a trigger for Article 5, the vague nature of cyber-attacks may make it practically difficult to follow through.<sup>121</sup>

### Singapore's Strategic Estimate

This section aims to provide a brief context of conscription in Singapore, and how it fits into Singapore's overall defense strategy from its initial years to today. In addition, Singapore's quintessential role within ASEAN will be explained, and what inherent constraints and opportunities are present within this relationship.

### Origins of Conscription in the SAF

Singapore started conscription to build its army in 1967, two years after an abrupt separation from Malaysia and receiving independence. Since then, conscription has been an integral part of the SAF, with the bulk of the SAF's strength being formed by conscripts and reserves. While taken for granted today, the choice to adopt conscription was a deliberate decision by Singapore's founding fathers, and was attributed to the need to stand up a credible defense quickly in face of potential threats, while at the same time to promote unity within the newly independent nation.

Following Singapore's unexpected independence in 1965, the immediate concern was to establish a credible defense quickly. Singapore had been a key node for British forces stationed in South East Asia, and this provided a sense of security and brought stability to the region. News of the British policy to withdraw forces east of the Suez by

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<sup>121</sup> Atlantic Council, "Stoltenberg Provides Details of NATO's Cyber Policy," 16 May 2018, accessed 10 February 2019, <https://www.atlanticcouncil.org/blogs/natosource/stoltenberg-provides-details-of-nato-s-cyber-policy>.

1971 presented significant concerns, as Singapore was ill-equipped to take up its own defense, possessing only two infantry battalions and two wooden hulled boats at that time. A credible defense was needed, not just in response to the Japanese invasion and occupation of Singapore during the Second World War, but also to bring stability in the face of hostilities with its neighbors. Indonesia had opposed the creation of Malaysia, of which Singapore had been a part of, and its armed forces had responded by conducting low-level attacks in Singapore and Malaysia from 1963. This period, termed as Konfrontasi, was still ongoing at the point of Singapore's independence, and the British presence in Singapore and Malaysia had been crucial in tempering the conflict.<sup>122</sup> Singapore's relationship with Malaysia was also considerably acrimonious at that time. Following failure to establish a common market, and clashing political views of both governments which led to separation in 1965, Singapore's leaders feared that ultra-nationalist entities in Malaysia would instigate a forceful takeover of Singapore.<sup>123</sup> The fact that Singapore's two battalions at that time were under Malaysian command and incidents which saw Malaysian troops stationing themselves in Singapore further stiffened the resolve of Singapore's leaders to build up a defense quickly.<sup>124</sup> With Britain unable to be persuaded to stay, and America's inability to support due to its commitment in the Vietnam War, Singapore recognized the need to be self-reliant.<sup>125</sup>

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<sup>122</sup> Kuan Yew Lee, *From Third World to First: The Singapore Story, 1965-2000* (New York: HarperCollins Publishers), 21.

<sup>123</sup> *Ibid.*, 15.

<sup>124</sup> *Ibid.*, 16.

<sup>125</sup> *Ibid.*, 42.

Conscription was chosen as the means to establish a credible defense quickly. With conscription and mobilization of reserves, it was projected that Singapore could field an army of 150,000 after five years, and possibly even up to 250,000 if older persons and women were enlisted to fill non-combat roles.<sup>126</sup> This was a significant figure, especially for a population of under two million at that time, and would help to mitigate the disparity in the population ratios between Singapore and its neighbors who were many times its size. Through augmentation with technology and proper training, it was envisaged that Singapore's conscript force could prove to be formidable even against professional armies, a vision best described by Singapore's first defense minister Goh Keng Swee, "the war-making potential of a small, vigorous, well-educated and highly motivated population should never be underestimated."<sup>127</sup>

Conscription was also considered as an affordable solution that was necessary given Singapore's then fragile economy. The British base in Singapore contributed 20 percent of the national gross domestic product and provided employment for around 70,000 Singaporeans.<sup>128</sup> Britain's plan to withdraw all its forces by the mid-1970s would have significant impact on Singapore's economy, which was already fragile due to the lack of a common market with Malaysia and suspended trade with Indonesia. As such, it was assessed that the economy could not support the expense of maintaining a large professional standing army. Lee asserted that a small standing army plus the capacity to

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<sup>126</sup> Lee, *From Third World to First: The Singapore Story, 1965-2000*, 17.

<sup>127</sup> *Ibid.*

<sup>128</sup> *Ibid.*, 52.

mobilize the whole civilian population would be more prudent, and money could be better invested in infrastructure to raise and train this force.<sup>129</sup>

Apart from defense, Singapore's leaders recognized the benefits that conscription would bring to nation building. As a young multi-racial nation, Singapore struggled to unite the different races which harbored deep-seated distrust for each other.<sup>130</sup>

Furthermore, the army units at that time consisted predominantly of Malays, as military service had been stigmatized by the other races and Singapore's leaders were concerned that racial tensions could arise as the army's demographics did not reflect the Chinese-majority population in Singapore.<sup>131</sup> Universal conscription was thus seen to be able to bring political and social benefits to Singapore, to integrate young men into a united community for a common purpose, regardless of their race, religion or social background.<sup>132</sup> Reservists were also required to report back to their units for a few weeks of refresher training annually. Conscription thus mobilized the whole society in defense activities, bringing in businesses, schools, families, communities into a supporting network under a concept called "Total Defense."<sup>133</sup>

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<sup>129</sup> Lee, *From Third World to First: The Singapore Story, 1965-2000*, 19.

<sup>130</sup> *Ibid.*, 16.

<sup>131</sup> *Ibid.*

<sup>132</sup> *Ibid.*, 19.

<sup>133</sup> *Ibid.*, 27.

## The SAF Today

Conscription allowed the SAF to raise up a large army quickly. However, this infantry-dominated army only provided a rudimentary defense, and gave rise to the SAF's description as a "poisonous shrimp" in its early days. While it was envisaged that such a force would eventually be defeated in war, in the process it would inflict high levels of damage to the attacking state's armed forces.<sup>134</sup> Despite the inherent defeatist nature of such a strategy, it was hoped that it could sufficiently deter any potential aggressors from attacking Singapore. After decades of strong economic growth and increasing military expenditure, MINDEF in the 1980s began to place greater emphasis on the deterrence aspect of the SAF. As then-Chief of Staff (General Staff) Brigadier General Lee Hsien Loong acknowledged, Singapore's defense policy needed to change to one of "If you come, I'll whack you, and I'll survive."<sup>135</sup> This posture was likened to a "porcupine" which could demonstrate the credibility of its deterrence by being able to bristle and rattle its quills to warn off predators.<sup>136</sup> The U.S.' successful demonstration of its Air-Land Battle doctrine Operation Desert Storm in 1990 was a watershed moment for Singapore. Recognizing the value of firepower over mass, the SAF underwent another major doctrinal shift towards combined arms and joint operations, and began to emphasize the need to achieve a "swift and decisive victory" over its aggressor, to deliver

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<sup>134</sup> Bernard Fook Weng Loo, "Maturing the Singapore Armed Forces: From Poisonous Shrimp to Dolphin," in *Impressions of the Goh Chok Tong Years in Singapore*, eds. Bridget Welsh, James Chin, Arun Mahizhnan, and Tarn How Tan (Singapore: NUS Press), 179.

<sup>135</sup> *Ibid.*

<sup>136</sup> *Ibid.*, 180.

a “knock-out punch in round one” as described by then-Minister of State for Defense Matthias Yao.<sup>137</sup> In the 2000s, the SAF saw rapid modernization of its conventional capabilities, especially in key platforms such as fighters, frigates and submarines, and artillery and tanks, as well as heavy investments in the area of battlefield awareness and electronic warfare systems, to develop the SAF into its current “third-generation” form.<sup>138</sup> This 3G SAF today is described as a “dolphin”, being “smart agile, maneuverable, and able to move quickly away from danger, but also armed with sharp teeth and an ability to defend itself against larger and more fearsome predators.”<sup>139</sup>

### Singapore in Southeast Asia

In considering Singapore’s defense posture, it is useful to understand its geopolitical realities. Southeast Asia is a region with unparalleled cultural, religious, linguistic, and ethnic diversity, vastly different from most of the world whose major civilizations largely live apart in separate geographic areas.<sup>140</sup> In a relatively small geographical space, there are 240 million Muslims, 130 million Christians, 140 million Buddhists and seven million Hindus, while not accounting the sub-divisions within each ethnic group, for example the Acehnese and Javanese in Indonesia are Muslim but

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<sup>137</sup> Loo, “Maturing the Singapore Armed Forces: From Poisonous Shrimp to Dolphin,” 180.

<sup>138</sup> *Ibid.*, 181.

<sup>139</sup> *Ibid.*, 182.

<sup>140</sup> Kishore Mahbubani, “ASEAN: An Unexpected Success Story,” adapted from *The ASEAN Miracle: A Catalyst for Peace*, accessed 10 February 2019, <https://thecairoreview.com/essays/asean-an-unexpected-success-story>.



culturally distinct. In addition, the effects of colonization, and the relatively recent decolonization, also left divisions between and within nations. Predicting trouble for the region, British historian, C.A. Fisher, described Southeast Asia as the “Balkans of Asia” and being even more diverse than the Balkans of Europe. Despite initial pessimism, Southeast Asia has seen remarkable progress over the past decades, and is today one of the fastest growing regional economy in the world, being set to become the fourth largest single market in the world by 2030, after the U.S., China and the EU.

Alan Collins describes Southeast Asia as being part of the Third World, not just in terms of the prevalence of economic underdevelopment and poverty, but more so due to the primacy of internal threats to state security, especially regime security.<sup>141</sup> These internal threats stem from the challenges of national identity and political legitimacy that newly decolonized states tend to face. Less Thailand, all other Southeast Asia states had been once colonies of Portugal, Spain, Netherlands, Britain, France or the U.S. Colonial influence tended to create territorial entities with many disparate ethnic groups within them, and also had the effect of dividing groups between neighboring states. As such following decolonization, contentious borders and irredentist ambitions of each ethnic group within a state posed challenges to state-making efforts.<sup>142</sup> Collins adds that state-making in the Third World is significantly different from the European experience. In Europe, “state-makers constructed, then imposed, strong national governments before mass politics began,” whereas in Third World regimes, “these two processes tend to

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<sup>141</sup> Alan Collins, *Security and Southeast Asia: Domestic, Regional and Global Issues* (Boulder, CO: Lynne Rienner Publishers), 10.

<sup>142</sup> *Ibid.*, 11.

occur together.” In addition, European state-making was achieved over a period of centuries, allowing the ruling elite time to strengthen their power base and achieve legitimacy, whereas the same scale is being attempted in Southeast Asia as quickly as possible.<sup>143</sup>

Apart from internal threats, Collins argues that Southeast Asian states also “keep a watching brief on their neighbors,” and that the Southeast Asian security complex is one that exhibits both amity and enmity.<sup>144</sup> On both the Indochina and Malay Archipelago sub-complexes, there have been numerous border skirmishes between neighboring states relating to a variety of security issues, including border demarcation, ethnic minority guerilla forces, and drug trafficking.<sup>145</sup> This has required a primary devotion to land forces to suppress these internal security threats. In addition, Southeast Asian states have also been steadily building up their air and naval power.<sup>146</sup> From 1985 to 1996, there was a real increase in defense expenditure as the Southeast Asian states increased their defense budgets in line with the economic growth they were enjoying, investing resources into modern power-projection weapons, such as fighter aircraft, frigates, and submarines, giving rise to security concerns of an East Asia arms race.<sup>147</sup> Though the economic crash in 1997 greatly slowed arms spending, the rate of weapon

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<sup>143</sup> Collins, *Security and Southeast Asia: Domestic, Regional and Global Issues*, 14.

<sup>144</sup> *Ibid.*, 16.

<sup>145</sup> *Ibid.*, 94.

<sup>146</sup> *Ibid.*, 95.

<sup>147</sup> *Ibid.*

procurement has risen again in response to changing global circumstances. The end of the Cold War and the drawdown of the U.S. presence in the region was feared to leave a power vacuum to be filled by either China or Japan, and also thaw intraregional disputes that were frozen during the Cold War. As such, the need for enhanced self-reliance and investments in defense have been brought to the fore. The ratification of the 1982 International Law of the Sea in 1994 also brought into effect the legal provision for two hundred nautical-mile Exclusive Economic Zones (EEZ) for coastal states. However, when applied in Southeast Asia's archipelagic context, this has resulted in overlapping sea claims, especially in the South China Sea, and hence has created the need for states to invest in power-projection capabilities to provide surveillance and protection over this new territory.<sup>148</sup> These waters not only harbor precious oil and gas reserves but also fishing stocks that are crucial to feed the rapidly increasing Southeast Asian populations.<sup>149</sup> This has led to clashes in the maritime domain between fishing and naval vessels, not just between Southeast Asian states but in recent years also with China, which has claimed more than 80 percent of the South China Sea with its "nine-dash line," overlapping the EEZ claims of Brunei, Indonesia, Malaysia, the Philippines, Taiwan and Vietnam, and has established radar and missile batteries on artificial islands in the South China Sea.<sup>150</sup>

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<sup>148</sup> Collins, *Security and Southeast Asia: Domestic, Regional and Global Issues*, 97.

<sup>149</sup> *Ibid.*, 104.

<sup>150</sup> William Pesek, "Making Sense of the South China Sea Dispute," *Forbes*, 21 August 2017, accessed 10 February 2019, <https://forbes.com/sites/outofasia/2017/08/22/making-sense-of-the-south-china-sea-dispute>.

Key to managing regional security in Southeast Asia is the Association of Southeast Asian Nations (ASEAN), a regional body comprising ten of the eleven states<sup>151</sup> of Southeast Asia as members. ASEAN was formed in 1967, by the founding members of Indonesia, Malaysia, Philippines, Singapore, and Thailand, to be a regional platform for dialogue and cooperation.<sup>152</sup> ASEAN has often come under fire for its slow and unwieldy decision-making process with its emphasis on consensus and avoidance of adversarial bargaining.<sup>153</sup> This is known as the “ASEAN Way,” and as asserted by Collins, is expressed in three norms: first, decision making is achieved through consensus; second, if a compromise cannot be found, then the issue is adjourned; and third, members are prepared to defer their own interests to the interests of the association.<sup>154</sup> Given these norms, ASEAN is viewed not as a conflict resolution body, but as an instrument to build confidence and mutual support which contributes ultimately to regional resilience.<sup>155</sup> Underpinning this is ASEAN’s cardinal principle of noninterference which, Collins argues, supports nation building efforts by individual states and leads to lasting mutual security in the region.<sup>156</sup> While these principles have invited criticism, Kishore Mahbubani argues the paradox that ASEAN’s strength lies in fact in its weakness,

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<sup>151</sup> East Timor is still in the process of joining ASEAN.

<sup>152</sup> Lee Hsien Loong, “The ASEAN Journey and the Road Ahead,” *ASEAN Focus*, no. 4 (July 2018): 2.

<sup>153</sup> Collins, *Security and Southeast Asia*, 133.

<sup>154</sup> *Ibid.*

<sup>155</sup> *Ibid.*, 135.

<sup>156</sup> *Ibid.*, 137-138.

“ASEAN has emerged as the indispensable platform for great-power engagement in the Asia-Pacific region precisely because it is too weak to be a threat to anyone; as a result, all the great powers instinctively trust it.”<sup>157</sup> ASEAN has also managed to stay united and has even grown stronger after all these years, a dysfunction that tend to befall many other regional organizations that are dominated by one country, instead of operating on a basis of equality.<sup>158</sup> That no one member state dominates ASEAN is a source for trust for member states and third parties, and as George Yeo, Singapore’s former foreign minister explained, “That is the genius of ASEAN foreign policy. In the end, almost with a sneer, they accepted that ASEAN should be in the driving seat. Yes, ASEAN’s leadership is the most preferred because no other driver would be trusted by the others.”<sup>159</sup> An example of the ASEAN Way in action is the ongoing South China Sea dispute. Although not all ASEAN members are claimant states and do not have a unified stance, ASEAN has still been able to establish common ground to “uphold the international rule of law, secure regional peace and stability, and maintain freedom of navigation and overflight,” and has successfully drafted a Code of Conduct with China, a major achievement in the decades-long dispute that, when completed, will mitigate future conflicts.<sup>160</sup> As noted by Mahbubani, this slow but sure way of consultation and consensus building has evolved into a culture of peace, which ASEAN has begun to share with the larger Asia-Pacific

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<sup>157</sup> Mahbubani, “ASEAN: An Unexpected Success Story.”

<sup>158</sup> Ibid.

<sup>159</sup> Ibid.

<sup>160</sup> Lee, “The ASEAN Journey and the Road Ahead,” 3.

region and beyond.<sup>161</sup> This has enabled ASEAN to not just survive but also succeed in bringing peace and prosperity to a troubled region, a remarkable feat in the fifty years since its formation.

### Drivers of Change

While conscription has been crucial in Singapore's defense strategy and contributing to nation building efforts in its early years, the circumstances in which it was established are considerably different to that today and going forward in the future. To consider the question whether conscription would still be relevant for Singapore, it is necessary to examine the key future trends that would impact the basis for conscription.

#### Rise of Unconventional and Asymmetric Threats

Warfare is becoming more complex, with the rise of unconventional and asymmetric threats. Termed commonly in the West as hybrid warfare, James K. Wither defines it as the blending of conventional and irregular approaches across the full spectrum of conflict. This is not a new concept, with numerous examples of hybrid techniques and approaches at the tactical, operational and strategic levels having been employed as far back as the Peloponnesian War and discussed in the writings of Sun Tzu.<sup>162</sup> However, hybrid warfare has since gained prominence in light of Russia's invasion of Georgia in 2008 and Ukraine in 2014, which saw not just use of irregular forces in conjunction with conventional forces, but also an integrated campaign of non-

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<sup>161</sup> Mahbubani, "ASEAN: An Unexpected Success Story."

<sup>162</sup> James K. Wither, "Making Sense of Hybrid Warfare," *Connections* 15, no. 2 (Spring 2016): 74.

military tools such as “diplomatic means; sophisticated and rapid information; electronic and cyber operations; covert and occasionally overt military and intelligence action; and economic pressure.”<sup>163</sup> This doctrine has also been publicly acknowledged by Russia under the term “new generation warfare” or “non-linear war,” encompassing the broad use of “political, economic, informational, humanitarian and other non-military means, supplemented by civil disorder among the local population and concealed armed forces.”<sup>164</sup> Similar as well is the Chinese theory of unrestricted warfare as introduced in 1999 by two colonels from the People’s Liberation Army.<sup>165</sup> Couched as a strategy to confront an opponent with superior military technology such as the U.S., unrestricted warfare was the idea that a state should not be constrained to just armed force, but to utilize any and all methods available to compel its opponent to bend to its will.<sup>166</sup> These methods would include: “computer hacking, subversion of banking systems, markets and currency manipulation, terrorism, media disinformation, and urban warfare.”<sup>167</sup> To be able to respond effectively to these hybrid threats, Bastian Giegerich argues that

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<sup>163</sup> International Institute for Strategic Studies, “Complex Crises Call for Adaptable and Durable Capabilities,” in *The Military Balance* 115, no. 1 (London: Routledge, 2015): 5.

<sup>164</sup> Wither, “Making Sense of Hybrid Warfare,” 80-81.

<sup>165</sup> *Ibid.*, 78.

<sup>166</sup> G. Commin and E. Filiol, “Unrestricted Warfare versus Western Traditional Warfare: A Comparative Study,” *Journal of Information Warfare* 14, no. 1 (2015): 15.

<sup>167</sup> Wither, “Making Sense of Hybrid Warfare,” 78.

resilience will be crucial.<sup>168</sup> In the context of national security, resilience refers to the “ability of societies to manage threats and risks, to adapt to them, and to recover from them should an attack or event occur, without losing the ability to provide basic functions and services to the members of that society.”<sup>169</sup> The prevention and defense against hybrid threats will not be the sole responsibility of the military, but will need to involve the entire government, the private sector, and society as a whole as well.<sup>170</sup> Giegerich goes further to add that the conventional military deterrence afforded by a standing army still has an important part to play, especially in the case of at-risk NATO member states.<sup>171</sup> The responsibilities of such standing forces would expand however, to not just comprise armed action, but to also conduct intelligence and information operations to identify and mitigate vulnerabilities.<sup>172</sup>

#### Ascendancy of Firepower over Maneuver

Another trend is the ascendancy of firepower over maneuver which challenges the premise of a large land force. As with hybrid threats, this is not a recent trend. The Industrial Revolution enabled mechanized production methods on a large scale, introducing rifled weapons with increased range and accuracy and the use of railways in

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<sup>168</sup> Bastian Giegerich, “Hybrid Warfare and the Changing Character of Conflict,” *Connections* 15, no. 2 (Spring 2016): 69.

<sup>169</sup> Giegerich, “Hybrid Warfare and the Changing Character of Conflict,” 69.

<sup>170</sup> *Ibid.*, 69-70.

<sup>171</sup> *Ibid.*, 70.

<sup>172</sup> *Ibid.*



war.<sup>173</sup> This increased lethality and mobility allowed smaller forces to overcome the traditional advantage of mass, as first seen in the Crimean War where a smaller but better equipped British and French side defeated a much larger Russian army. Battlefield tactics also seemingly changed to favor the defense, as infantry charges became ineffective in face of superior firepower, as made obvious during the 1866 Austro-Prussia war where Prussian troops equipped with the quick-firing Dreyse needle gun mowed down the bayonet-charging Austrians in the forests of Koniggratz.<sup>174</sup> Mass and élan, a formidable combination introduced by Napoleon, were envisaged to be replaced by dispersed and flexible formations.<sup>175</sup> However, the trend of massed armies did not fall out of fashion and instead accelerated through industrialization, with devastating results in the First World War. Despite the growing lethality of weapons, military leaders on both sides maintained an unwavering doctrine of the offensive and believed that battle could only be won by the side willing to accept heavy losses.<sup>176</sup> Armies continued to rely on the massed charge, now supported by indirect fire, to overcome high-rate magazine fire, believing that the moral element of sacrifice would trump materiel factors.<sup>177</sup> As Michael Howard

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<sup>173</sup> Murray and Knox, "Thinking about Revolutions in Warfare," 9.

<sup>174</sup> Dennis E. Showalter, "The Prusso-German RMA, 1841-1871" in *The Dynamics of Military Revolution 1300-2050*, eds. MacGregor Knox and Williamson Murray (Cambridge, UK: Cambridge University Press), 109.

<sup>175</sup> *Ibid.*, 112.

<sup>176</sup> Michael Howard, "Men against Fire: The Doctrine of the Offensive in 1914," in *Makers of Modern Strategy, from Machiavelli to the Nuclear Age*, eds. Peter Paret, Gordon Alexander Craig, and Felix Gilbert (Princeton, NJ: Princeton University Press), 510.

<sup>177</sup> *Ibid.*, 515.

commented on this concept of necessary sacrifice, “the casualty lists that a later generation was to find so horrifying were considered by contemporaries not an indication of military incompetence, but a measure of national resolve, of fitness to rank as a Great Power.”<sup>178</sup> This trend would continue in the Second World War. Despite the perfection of movement in three dimensions which revitalized maneuver warfare and brought air power to the forefront, nations still waged extensive land battles with even larger armies.<sup>179</sup> Seemingly remaining evident was the ideology of sacrifice in the Second World War which saw more than twice the number of military deaths as compared to the First World War.<sup>180</sup> A paradigm shift came with the development and use of nuclear weapons by the U.S. at the end of the Second World War and the Soviet Union’s subsequent acquisition of similar technology. Its destructive power and indiscriminate nature ushered in an era of nuclear deterrence, which has been credited with preventing the long-anticipated Third World War from materializing.<sup>181</sup> However, the belief that nuclear weapons made land warfare obsolete was proved quickly to be a fallacy with the

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<sup>178</sup> Howard, “Men against Fire: The Doctrine of the Offensive in 1914,” 522.

<sup>179</sup> Williamson Murray and MacGregor Knox, “The Future Behind Us,” in *The Dynamics of Military Revolution, 1300-2050* (Cambridge, UK: Cambridge University Press), 177.

<sup>180</sup> Data extracted from Encyclopedia Britannica, “Killed, Wounded, and Missing,” accessed 10 February 2019, <https://www.britannica.com/event/World-War-I/Killed-wounded-and-missing/>; John Graham Royde-Smith and Thomas A. Hughes, “World War II,” Encyclopedia Britannica, last updated 5 June 2019, accessed 10 February 2019 and <https://www.britannica.com/event/World-War-II/>.

<sup>181</sup> Murray and Knox, “Thinking about Revolutions in Warfare,” 11.

onset of the Korean War.<sup>182</sup> Having stripped their land forces to minimal levels following the end of the Second World War, the Truman administration was compelled to revive the draft and recall reservists and national guardsmen to wage conventional battle against a large but rudimentary North Korean and Chinese force.<sup>183</sup> The realization that nuclear weapons were ineffective at winning conventional conflict resulted in a wave of revolutions in military affairs, in “precision reconnaissance and strike, stealth, computerization and computer networking of command and control; and increased lethality of conventional munitions.”<sup>184</sup> These technologies characterize the Western view of warfare today, and have been termed by some as “information-age warfare.”<sup>185</sup> In this construct, information is considered the “central resource of the third-wave economy [and the] oil of the future”,<sup>186</sup> enabling militaries to launch standoff precision weapons from anywhere, reducing risk of casualties to own forces.<sup>187</sup> As such, information-age warfare circumvents the political challenges in mobilizing a land force to respond to

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<sup>182</sup> Michael Carver, “Conventional Warfare in the Nuclear Age” in *Makers of Modern Strategy, from Machiavelli to the Nuclear Age*, eds. Peter Paret, Gordon Alexander Craig, and Felix Gilbert (Princeton, NJ: Princeton University Press), 780.

<sup>183</sup> Geoffrey Parker, ed., *Cambridge Illustrated History of Warfare* (Cambridge, UK: Cambridge University Press), 341.

<sup>184</sup> Murray and Knox, “Thinking about Revolutions in Warfare,” 13.

<sup>185</sup> Colin S. Gray, “The Changing Nature of Warfare?” *Naval War College Review* 49, no. 2 (Spring 1996): 7.

<sup>186</sup> *Ibid.*, 13.

<sup>187</sup> *Ibid.*, 10-13.

challenges that do not threaten vital interests.<sup>188</sup> However, Colin S. Gray argues that similar to the U.S.' brief atomic bomb monopoly, information-age warfare will only be effective if the adversary wages war according to your preferred rules, noting that the U.S.' proficiency in information-age warfare could be easily replicated by other state actors or even negated by rudimentary asymmetric means in low-intensity conflicts.<sup>189</sup> Should that occur, the ultimate determinant in war would revert to the "man on the scene with a gun."<sup>190</sup>

### Singapore's Changing Demographics

The last trend to consider is Singapore's changing demographic and its impact on public perception towards conscription. Some of the current policies to mitigate these challenges will also be briefly discussed. First, rising education levels have resulted in increased expectations of what value NS brings to the individual. To keep pace with the economy's transition from an export-led industrialization strategy to a knowledge-economy phase, Singapore's education system underwent significant reforms in the 1970s and in the mid-1990s.<sup>191</sup> Education methods shifted away from traditional rote learning and passive memorization to focus on higher-order thinking skills such as logical

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<sup>188</sup> Ibid., 11.

<sup>189</sup> Gray, "The Changing Nature of Warfare?" 14.

<sup>190</sup> Ibid., 15.

<sup>191</sup> Albert Lau, "National Service and Citizen Soldiers: The Singapore Experience of Military Conscription" in *National Service in Singapore*, eds. Shuhuang Ho and Graham Ong-Webb (Singapore: World Scientific Publishing), 11.

reasoning and problem-solving.<sup>192</sup> These moves have been successful, with Singaporean students consistently performing well in global benchmarking tests on critical thinking.<sup>193</sup> As such, when these students are subsequently enlisted into the military, they are less satisfied with their experience especially when assigned roles not requiring much critical thinking.<sup>194</sup> To engender a more positive NS experience, the SAF adopted a more open management style to better engage its better educated conscripts, and avoided activities that were perceived as being a “waste of time” such as polishing boots till they shone.<sup>195</sup> Training also became more focused, with certain non-warfighting tasks like preparing meals and cleaning of common areas outsourced to contract workers.<sup>196</sup> The SAF has also invested in technologies to improve training realism, as well as the quality of personal equipment and combat rations to improve the soldier experience.<sup>197</sup>

Second, the collective community spirit and willingness to make personal sacrifice is becoming eroded amidst increasing individualism and globalization. NS was introduced in the early years following Singapore’s sudden independence, during which a mood of national vulnerability created a willingness to forego personal and immediate

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<sup>192</sup> Amelia Teng, “How Singapore’s Students Rose to No. 1,” *Straits Times*, 24 December 2016, accessed 10 February 2019, <https://www.straitstimes.com/singapore/education/how-spores-students-rose-to-no-1>.

<sup>193</sup> *Ibid.*

<sup>194</sup> Lau, “National Service and Citizen Soldiers,” 12.

<sup>195</sup> *Ibid.*, 21.

<sup>196</sup> *Ibid.*, 22.

<sup>197</sup> *Ibid.*, 22-23.

gains to forge a new state.<sup>198</sup> Today however, Singapore is a high-income globalized economy, and the “high pace of life, pressures of work, prevalence of dual-career families and smaller family units have led to an increasing focus on the individual.”<sup>199</sup> In a national survey on values conducted in 2015, Singaporeans themselves described the top defining characteristic of Singapore society as being “kiasu” or “the fear to lose.”<sup>200</sup> As such, while there is tacit acceptance by almost all Singaporeans<sup>201</sup> and political parties on the necessity for NS,<sup>202</sup> the issue of equity remains contentious. Originally based on the Israeli army’s example, full-time service durations used to be differentiated, with Officers serving three years, NCOs two and a half, and enlisted two.<sup>203</sup> However, this led to the occurrence of eligible recruits deliberately failing their NCO or Officer Cadet courses to avoid longer service, a trend which was mitigated only after service durations were reduced across the board to two years in 2004.<sup>204</sup> To reinforce the principle of

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<sup>198</sup> Barry Desker, “Will Singapore’s Collective Spirit Prevail?” *Straits Times*, 13 August 2013, accessed 10 February 2019, <https://www.straitstimes.com/singapore/will-singapores-collective-spirit-prevail>.

<sup>199</sup> *Ibid.*

<sup>200</sup> Walter Sim, “Singaporeans See Virtues like Compassion in Themselves but view Society as Materialistic,” *Straits Times*, 23 July 2015, accessed 10 February 2019, <https://www.straitstimes.com/singapore/singaporeans-see-virtues-like-compassion-in-themselves-but-viewsociety-as-materialistic>.

<sup>201</sup> Leong Chan-Hoong, Yang Wai Wai, and Henry Ho, *Singaporeans’ Attitudes to National Service* (Singapore: Lee Kuan Yew School of Public Policy, 2013).

<sup>202</sup> Lau, “National Service and Citizen Soldiers,” 18.

<sup>203</sup> *Ibid.*, 9.

<sup>204</sup> *Ibid.*, 13.

equity, NS is applied to all male citizens who meet the medical criteria, including those from rich and influential Singaporean families.<sup>205</sup> Aware of the social implications if the privileged were exempted, a policy was enacted, lasting from the 1970s to 2000,<sup>206</sup> whereby sons of influential Singaporeans – including politicians, top civil servants, senior military, police and civil defense officials, and high earners – were specially identified and monitored to deliberately ensure that they would not be given any preferential treatment because of their parentage and family connections.<sup>207</sup> Deferment and disruption of service is also rare and given only for select cases that support broader SAF or national objectives. For example, conscripts are allowed to disrupt for medical studies and upon completion, return to complete their service as Medical Officers due to the operational need for the latter in the SAF.<sup>208</sup> The same policy also applies to exceptional talents in the music and sporting fields to allow the opportunity to represent Singapore at pinnacle international competitions and there have been recent calls for this policy to be expanded to other fields as well.<sup>209</sup> There has also been resentment among some Singaporeans that immigrants, particularly Permanent Residents (PR), increase

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<sup>205</sup> *Ibid.*, 14.

<sup>206</sup> The policy was discontinued in 2000 as it was assessed that Singaporeans had already come to accept that the SAF would indeed treat all servicemen fairly regardless of socioeconomic status.

<sup>207</sup> Lau, “National Service and Citizen Soldiers,” 15.

<sup>208</sup> *Ibid.*, 17.

<sup>209</sup> Kenneth Cheng, “Artists seeking NS Deferment need ‘Convincing’ Proof of Potential,” *Today*, 15 November 2013, accessed 10 February 2019, <https://www.todayonline.com/singapore/artists-seeking-ns-deferment-need-convincing-proof-potential>.

competition for jobs but are able to enjoy benefits of being a resident but without any NS liabilities.<sup>210</sup> First generation PRs are exempted for administrative reasons, while second generation PRs are mandated to serve, however a significant number of them have renounced their residential status to avoid serving NS.<sup>211</sup> As a measure to help mitigate these invidious comparisons, MINDEF introduced the SAF Volunteer Corps (SAFVC) in 2014 to allow peoples without NS liabilities, such as women, first-generation PRs, and new citizens, more inclusive participation in national defense.<sup>212</sup> Interest in the new scheme has been promising, with around 900 applicants signing up in the first intake, with applicants noting reasons to serve such as having a “desire to repay society and country, set an example for their children, interest in military life,” and to “help them feel more rooted to their new home.”<sup>213</sup>

Third, society has become increasingly sensitive to casualties incurred by military training. As Tim Huxley notes, a major cause of apprehension for conscription is “the occasional deaths and much more frequent injuries which inevitably occur as part of a

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<sup>210</sup> Leong Chan-Hoong, “Re-imagining National Service in the Era of Hyperculturalism,” in *National Service in Singapore*, eds. Ho Shuhuang and Graham Ong-Webb (Singapore: World Scientific Publishing), 159.

<sup>211</sup> Ministry of Defence Singapore, “Written Reply by Minister for Defence Dr Ng Eng Hen to Parliamentary Question on Permanent Residents in National Service,” 22 November 2011, accessed 10 February 2019, [https://www.mindef.gov.sg/imindef/press\\_room/official\\_releases/ps/2011/22nov11\\_ps.html](https://www.mindef.gov.sg/imindef/press_room/official_releases/ps/2011/22nov11_ps.html).

<sup>212</sup> Lau, “National Service and Citizen Soldiers,” 32.

<sup>213</sup> Jianyue Xie, “First Batch of Volunteers Enlist into SAF Volunteer Corps,” *Today*, 25 March 2015, accessed 22 February 2019, <https://www.todayonline.com/singapore/first-batch-volunteers-enlist-saf-volunteer-corps>.



large-scale military training program.”<sup>214</sup> When accidents do happen, there is significant public outcry and sympathy, stemming from the general perception that these were young men who had their bright futures unfairly cut short while undergoing mandatory service and that this could happen to anyone.<sup>215</sup> Such accidents risk eroding public support for NS as society grapples with the conflicting “need for the SAF to train so hard when Singapore is not at war or under perceivable threats from known adversaries.”<sup>216</sup> To avoid squandering this public support for NS that took the SAF significant effort over decades to build up, the SAF has been obliged to respond decisively to every incident, not only by adopting “high levels of safety-consciousness in training and exercises, but also for adept handling of public relations in the aftermath of such accidents.”<sup>217</sup>

Independent investigations are convened, usually comprising distinguished professionals from the legal, medical and safety-related fields outside MINDEF and the SAF, with the results made available for public scrutiny.<sup>218</sup> To determine culpability, separate police

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<sup>214</sup> Tim Huxley, *Defending the Lion City: The Armed Forces of Singapore* (St. Leonard, NSW: Allen & Unwin), 98.

<sup>215</sup> Min Zhang Lim, “Why Actor Aloysius Pang’s Death Sparked Outpouring of Public Grief,” *Straits Times*, 29 January 2019, accessed 22 February 2019, <https://www.straitstimes.com/singapore/why-actor-alloysius-pangs-death-sparked-outpouring-of-public-grief>.

<sup>216</sup> Kian Beng Kor, “Response from Society must not Weaken Support for NS,” *Straits Times*, 12 February 2019, accessed 22 February 2019, <https://www.straitstimes.com/singapore/response-from-society-must-not-weaken-support-for-ns>.

<sup>217</sup> Huxley, *Defending the Lion City: The Armed Forces of Singapore*, 98.

<sup>218</sup> Ministry of Defence Singapore, “Ministerial Statement by Minister for Defence Dr Ng Eng Hen, on National Service Training Deaths and Safety Enhancements for the SAF for Parliamentary Sitting,” 11 February 2019, accessed 22 February 2019,

investigations will also be conducted, whereby culpable servicemen will be charged accordingly based on civil law.<sup>219</sup> If criminal charges are not filed, servicemen may still be charged by the Military Courts if military law is deemed to have been breached. Even in instances where accidents did not occur but safety regulations were breached, commanders will also be taken up to task and disciplined accordingly.<sup>220</sup> This emphasis on training safety is a double-edged sword. While deemed necessary to ensure public support for its conscript armed forces, there has also been concerns that overemphasis may compromise realistic training and undermine the SAF's operational effectiveness.<sup>221</sup> Critics have also cautioned that the government's target of zero fatalities is wishful, especially in an organization in the business of war, and may fuel unrealistic public pressures that erode further support for NS.<sup>222</sup> That said, the Singapore government has expressed its commitment to achieving this seemingly impossible target and the delicate balance of tough, realistic and safe training.

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[https://mindef.gov.sg/web/portal/mindef/news-and-events/latest-releases/articledetail/2019/February/11feb19\\_ps](https://mindef.gov.sg/web/portal/mindef/news-and-events/latest-releases/articledetail/2019/February/11feb19_ps).

<sup>219</sup> Ibid.

<sup>220</sup> Ministry of Defence Singapore, "Ministerial Statement by Minister for Defence Dr Ng Eng Hen, on National Service Training Deaths and Safety Enhancements for the SAF for Parliamentary Sitting."

<sup>221</sup> Pritam Singh, "National Service: Training Safety, Operational Readiness and the Will to Fight - Adjournment Motion," 11 February 2019, accessed 22 February 2019, <https://wp.sg/national-service-training-safety-operational-readiness-and-the-will-to-fight-adjournment-motionby-pritam-singh>.

<sup>222</sup> Ibid.

## On Deterrence

Deterrence is a highly complex and nuanced enterprise.<sup>223</sup> As defined by Michael J. Mazarr, deterrence in world politics is the practice of discouraging another nation-state from taking unwanted actions, such as an armed attack, usually through the means of threat.<sup>224</sup> Deterrence's chief object is psychological as opposed to physical, to ultimately shape the thinking of a potential aggressor, or more precisely, that of the person or people who wield decision-making influence.<sup>225</sup> In addition, Mazarr suggests that deterrence can be achieved not just through military threat, but also by non-military threats along the other instruments of national power, such as "economic sanctions, diplomatic exclusion or information operations."<sup>226</sup>

In contrast to defense, deterrence seeks to threaten the aggressor before the initiating act of aggression.<sup>227</sup> Within this scope of pre-emptive posturing, deterrence can take two broad approaches.<sup>228</sup> *Deterrence by denial* focuses on the persuasion of a potential aggressor on the infeasibility of his intended actions. This typically involves the demonstration of defensive-oriented capabilities and their superior ability to repel an

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<sup>223</sup> Michael J. Mazarr, *Understanding Deterrence* (Santa Monica, CA: RAND Corporation, 2018), 11.

<sup>224</sup> Mazarr, *Understanding Deterrence*, 2.

<sup>225</sup> *Ibid.*, 1.

<sup>226</sup> *Ibid.*, 4.

<sup>227</sup> Kai Qing Kam, "The Viability of Deterrence Strategies for Non-Nuclear States," *POINTER, Journal of the Singapore Armed Forces* 44, no. 1 (2018): 14.

<sup>228</sup> *Ibid.*, 2.

attack, such as France's Maginot Line during the inter-war years, or the U.S.' Patriot batteries deployed in South Korea and Japan against North Korea (and possibly China). *Deterrence by punishment*, on the other hand, focuses on the severe threat of retaliation that would follow should the aggressor commit to his intentions. This threat would usually be backed by offensive-oriented capabilities capable of effecting a disproportionate cost on the aggressor, such as the U.S.' "Massive Retaliation" strategy post-1945, premised on its monopoly, though short-lived, on nuclear weapons.<sup>229</sup>

Kai Qing Kam posits that a credible deterrence strategy is predicated on three factors.<sup>230</sup> First, it must be *sufficient*. The state must possess and demonstrate the military capability to deal disproportionate damage in either denying or punishing the aggressor. Second, it must be *probable*. The state must convince the aggressor that it has the will to employ the said capabilities if threatened. Third, it must be *unambiguous*. The state should be able to communicate clearly to the aggressor its "red lines," crossing which would be tantamount to an unacceptable military provocation. However, Kam caveats that this theory is premised on the fundamental assumption that state actors are rational and will respond to disincentives and incentives in a logical and largely predictable manner.<sup>231</sup> In this regard, Mazarr notes that this expectation of rationality may not always be true, or at least understood in the same way universally, given that "decisions for war

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<sup>229</sup> David L. Melcher and John C. Siemer, "How to Build the Wrong Army," *Military Review*, no. 9 (September 1992): 66-76.

<sup>230</sup> Kam, "The Viability of Deterrence Strategies for Non-Nuclear States," 13.

<sup>231</sup> *Ibid.*, 12.

reflect a kaleidoscope of fears, goals, preferences, motives and other considerations.”<sup>232</sup>

As suggested by Patrick Morgan, while there is considerable benefit for a defender to seek local balance of forces, the aggressor’s motivation is the most important factor in deterrence success or failure.<sup>233</sup> On the question of how much force is then required for successful deterrence, Mazarr adds that the level need not be that to achieve an unquestioned ability to “win,” but instead would be sufficient if it were able to create the risk of escalation of costs beyond the aggressor’s motivation levels.<sup>234</sup> This was successfully demonstrated in the U.S. deployment in Europe during the Cold War, where its forces, though “incapable of denying any territory to the Soviets that they wish to take with full force,” strengthened the willingness of the West to activate the strategic airpower deterrent.<sup>235</sup>

The advent of nuclear weapons introduced a new paradigm to deterrence. The destructive power of nuclear weapons is undisputed and states have few, if any, reliable defenses against a nuclear attack other than having the capability and will to retaliate with their own nuclear weapons.<sup>236</sup> The extreme of mutually assured destruction thus produces a stabilizing effect between nuclear states, even when power asymmetry exists.<sup>237</sup> In this

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<sup>232</sup> Mazarr, *Understanding Deterrence*, 6.

<sup>233</sup> *Ibid.*, 8.

<sup>234</sup> Mazarr, *Understanding Deterrence*, 6.

<sup>235</sup> *Ibid.*

<sup>236</sup> Kam, “The Viability of Deterrence Strategies for Non-Nuclear States,” 15.

<sup>237</sup> *Ibid.*

aspect, nuclear deterrence, against another nuclear-armed state, is unambiguously credible. On the other hand, conventional deterrence is less reliable because of the challenges in communicating its credibility. Conventional deterrence is dependent on tenuous factors such as training proficiency and morale of troops, can be blunted by counter-capabilities that the aggressor possesses or is able to develop with an outcome that is less immediate and therefore less salient as compared to nuclear war.<sup>238</sup> This inevitably introduces some skepticism in the aggressor's calculations on its credibility. On the flipside, the ambiguity of conventional deterrence in fact provides greater flexibility in responding to aggression. Unlike the binary nature of nuclear deterrence, conventional responses can be graduated depending on the circumstances and the state's deterrence doctrine.<sup>239</sup> As seen in the U.S.' shift away from the "Massive Retaliation" doctrine to the more balanced approach advocated in NSC-68, retaining flexible deterrent options remains important even for the world's superpower.

### Conclusion

The literature review presents a mixed picture on conscription and there is not an obvious answer yet to the research question "whether a conscript army remains relevant for Singapore." It is a complex problem, with a wealth of information to consider in the analysis. The key points of the literature review are summarized in table 1 below. To be able to effectively apply this information, the author will construct a framework in

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<sup>238</sup> Kam, "The Viability of Deterrence Strategies for Non-Nuclear States," 15.

<sup>239</sup> Ibid.

Chapter 3 to allow for sense-making and focusing of efforts. Subsequently, the author will apply his analysis in Chapter 4 to answer the research question.

Table 1. Key Points from Literature Review	
<b>General Arguments on Conscription</b>	
<b>Advantages</b>	<ul style="list-style-type: none"> <li>• Scales quickly at relatively low cost</li> <li>• More representative of society</li> <li>• Inculcates desirable values in youth</li> <li>• Stabilizes democracies</li> <li>• Discourages foreign policy adventurism</li> </ul>
<b>Disadvantages</b>	<ul style="list-style-type: none"> <li>• Lower troop quality</li> <li>• Inequitable when applied selectively</li> <li>• Inefficient when applied universally</li> <li>• Hidden economic costs</li> <li>• Encourages risky battlefield tactics</li> </ul>
<b>Case Studies</b>	
<b>Israel</b>	<ul style="list-style-type: none"> <li>• Universal conscription as only feasible solution to achieve demographic parity with adversaries</li> <li>• Beneficial for nation building of disparate Jewish peoples</li> <li>• Enjoys wide public support, but threatened by increasing inequity</li> </ul>
<b>Taiwan</b>	<ul style="list-style-type: none"> <li>• Universal conscription originally purposed for offensive mission to retake the mainland, less relevant now for strategy of deterrence and defense</li> <li>• Achieves deterrence and defense primarily through advanced anti-access area denial capability across Taiwan Straits</li> <li>• Short conscription period serves only to build large reserves whose value lies in fighting a guerilla-style campaign in jungles and cities</li> </ul>
<b>Latvia</b>	<ul style="list-style-type: none"> <li>• Wholly reliant on NATO for defense</li> <li>• Conscription abolished in favor of professional forces that are focused on NATO missions to build goodwill, not national defense</li> <li>• Increasing challenges to national resilience of declining population, economic migration, and hybrid threats</li> </ul>
<b>Singapore's Strategic Estimate</b>	
<b>Key Points</b>	<ul style="list-style-type: none"> <li>• NS was the only means to raise a numerically comparable army quickly and affordably, with attendant benefit of nation building</li> <li>• Singapore's security posture premised on deterrence over defense</li> <li>• Southeast Asia security complex remains a mix of amity and enmity</li> </ul>
<b>Drivers of Change</b>	
<b>Key Points</b>	<ul style="list-style-type: none"> <li>• Hybrid threats are becoming the norm, and a similar hybrid response is required. National resilience will be crucial.</li> <li>• Though weapons will increase in lethality, the moral element of warfare is likely to remain relevant, especially for nations fighting for survival</li> <li>• While Singapore society is generally supportive of conscription, expectations on NS are rising.</li> </ul>
<b>Deterrence</b>	
<b>Key Points</b>	<ul style="list-style-type: none"> <li>• Deterrence by Denial versus Deterrence by Punishment</li> <li>• A credible deterrence must be sufficient, probable, and unambiguous</li> <li>• Conventional means while less credible, are more flexible and useful than nuclear weapons, especially when against non-nuclear states</li> </ul>

Source: Created by author.



## CHAPTER 3

### RESEARCH METHODOLOGY

Conscription is not simply a military problem, but one that affects politics, economics and society as well. As such, it is a complex issue and a linear problem-solving approach may not be suitable. This chapter will consider methods utilized by both the U.S. military and civilian business management professionals to tackle complex problems. A unified framework that combines useful elements from both fields will be proposed and used to guide the analysis of the problem.

#### Relevant References

##### Applied Professional Case Study Research

Using one's direct professional experience allows for efficient decision-making for simple problems, but is not optimized for complicated, complex and chaotic problems, which typically require a research-oriented approach. However, discounting professional experience is also disadvantageous, as it may lead to impractical and overly general solutions. Kenneth Long (2016) proposes a method to bridge this gap, termed as Applied Professional Case Study Research (APCSR).<sup>240</sup> To tackle complex problems, the APCSR method considers a research-oriented approach that is systematic, multi-perspective, and critical. This approach will incorporate case studies to inform decision-making and persuade through evidence and reason. At the same time, it also utilizes the

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<sup>240</sup> Kenneth E. Long, "Emerging Best Practices from Professional Applied Case Study Research" (lecture notes, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 15 September 2016).

professional experience and judgement that field grade officers would have accumulated, in order to tailor a solution that is not just suitable but also feasible based on professional standards and acceptable to the situation and the relevant stakeholders. Finally, it is an applied method designed to drive towards tangible implementation, as opposed to simply providing theoretical solutions. For this topic, the APCSR will be a useful overarching framework, within which other second-order methodologies will be incorporated where appropriate.

### Army Design Methodology

The U.S. Army uses the Army Design Methodology (ADM) to address unfamiliar or ambiguous problems and is typically used at the operational and strategic levels of planning.<sup>241</sup> Compared to the Military Decision Making Process (MDMP) and Troop Leading Procedures (TLP) which are clear and well-defined processes used at the tactical level to develop tangible actions, the ADM's focus lies in the framing of the operational environment in order to develop conceptual approaches. The ADM comprises the following steps: (1) understanding the current state, (2) projecting the desired end state, (3) identifying the obstacles that impede progress towards the desired end state, and (4) developing an operational approach. Given the wide scope and inherently fluid nature of this issue, framing the issue will be critical. As such, the ADM will be used as the entry point within the overall APCSR framework, to frame the problem and develop a conceptual approach.

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<sup>241</sup> Headquarters Department of the Army (HQDA), Army Techniques Publication (ATP) 5-0.1, *Army Design Methodology* (Washington, DC: Government Printing Office, 2015).

## Capabilities Based Assessment

Given that the issue directly impacts force structuring, it would be useful to reference how the U.S. Army conducts force management. The Capabilities Based Assessment (CBA) process is a three-phase process that translates planning guidance into key capabilities, gaps and solutions through the Functional Area Analysis, Functional Needs Analysis and Functional Solutions Analysis respectively.<sup>242</sup> Keeping the focus of this thesis at the conceptual level, Functional Area Analysis (FAA) will be utilized to translate the broad operational approach derived in the ADM into key capabilities and enablers required. Where applicable, these will be grouped in the domains of doctrine, organization, training, materiel, leadership, personnel, facilities and policy (DOTMLPF-P).

## Courtney's Uncertainty Management Approach

The decision making tools covered above provide the professional component of the APCSR method from the military perspective, and while adequate by themselves, it will be useful to consider how professionals from the business and management sectors deal with complex problems to glean relevant parallels where appropriate.

In their seminal work published in the Harvard Business Review in 1999,<sup>243</sup> McKinsey & Company consultants Hugh Courtney, Jane Kirkland, and Patrick Viguerie

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<sup>242</sup> U.S. Army War College, *How the Army Runs: A Senior Leader Reference Handbook, 2017-2018* (Carlisle, PA: US Army War College, 2018), 3-14.

<sup>243</sup> Hugh Courtney, Jane Kirkland, and Patrick Viguerie, "Strategy under Uncertainty," in *Harvard Business Review on Managing Uncertainty* (Boston: Harvard Business School Press), 1-31.

proposed a new way to think about strategy in the face of great uncertainty. Courtney et al (1999) argued that managers tended to adopt a binary strategic planning approach – to either assume that the world was certain and hence underestimate the threats and opportunities of uncertainty, or that the world was entirely unpredictable and hence base strategic decisions on gut instinct without analytical rigor. Such a binary view was a false dichotomy, and instead Courtney et al. asserted that uncertainty could be understood and strategic approaches tailored to exploit it. The uncertain environment could be defined as being at one of four levels: (1) a clear enough future, where there exist sufficient indicators to make a precise forecast, (2) alternate futures, where there are a few discrete scenarios, (3) a range of futures, where scenarios are many and do not fall into natural categories, and (4) true ambiguity, where there is absolute uncertainty. After ascertaining the level of uncertainty, the authors proposed three strategic postures (tiered by aggressiveness) and corresponding actions that managers could adopt to mitigate the threats while exploiting the opportunities of uncertainty. This will be a useful model when considering a broad implementation strategy tailored for Singapore’s context. The key elements of the model are summarized in table 2.

Table 2. Elements of the Courtney Uncertainty Management Model		
Levels of Uncertainty	Strategic Postures	Portfolio of Actions
<ul style="list-style-type: none"> <li>•Clear-Enough Future</li> <li>•Alternate Futures</li> <li>•Range of Futures</li> <li>•True Ambiguity</li> </ul>	<ul style="list-style-type: none"> <li>•Shape the Future</li> <li>•Adapt to the Future</li> <li>•Reserve the Right to Play</li> </ul>	<ul style="list-style-type: none"> <li>•No-Regrets Moves</li> <li>•Options</li> <li>•Big Bets</li> </ul>

*Source:* Adapted by author using Hugh Courtney, Jane Kirkland, and Patrick Viguerie, “Strategy under Uncertainty,” in *Harvard Business Review on Managing Uncertainty* (Boston: Harvard Business School Press), 1-31.

## Kotter's Change Management Model

John P. Kotter observed that the majority of change efforts undertaken by organizations do not achieve success, and identified eight common errors that organizations make in implementing change.<sup>244</sup> First, transformation growth is often stunted when there is a lack of urgency. Regardless whether there is indeed a pressing deadline for change, the sense of urgency must be drummed up or created to drive change. Second, not creating a powerful enough guiding coalition to rally around the leader and implement his vision. This will be especially important in larger organizations. Third, organizations need a vision that is appealing and can be easily understood to give overall direction to plans, directives, and programs. Fourth, the vision then must be communicated effectively across the organization, so as to achieve collective effort by every employee. Fifth, failure to identify and remove obstacles to the new vision will risk derailing the change effort. Sixth, leaders need to plan for short-term wins, to strengthen employee morale and maintain momentum. Seventh, leaders must resist their natural tendencies to declare victory as quickly as possible, as doing so too early would result in change efforts failing to reach maturity and possible lead to regression. Eighth, new approaches must be anchored into the organization's culture in order for them to survive and even evolve. To do so, leaders will need to consciously demonstrate the benefits of the change to the organization and educate future leaders to personify the change.

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<sup>244</sup> John P. Kotter, *Leading Change: Why Transformation Efforts Fail*, Best of Harvard Business Review Reprints, no. R0701J (Brighton, MA: Harvard Business Publishing, January 2007).

## Applied Methodology

Using the Applied Professional Case Study Research (APCSR) method as the overarching framework, the thesis will be structured in three phases as graphically represented in figure 1 below. The first phase will focus on framing the issue and obtaining a strategic estimate and will comprise the pre-research position identified in Chapter 1 and literature review in Chapter 2, inserted into a modified ADM framework. Whereby the ADM was designed to identify an operational approach to achieve a singular desired end state, in this case the end state is the strategic focus of Singapore's military, being the enhancement of Singapore's peace and security, and is unlikely to change. As such, the ADM framework will be modified to be useful, first to identify the operational approach that encompasses a set of principal considerations, and next, possible futures or sub-end states as suggested from the literature review.<sup>245</sup> The second phase will focus on development and analysis of possible solutions and will comprise three sub-phases to ensure that solutions are suitable, feasible and acceptable. For suitability, an abbreviated CBA will be conducted, focusing on key capabilities and enablers required for each possible future. For feasibility, the author will apply his professional evaluation based on relevant criteria distilled from the literature review. The output of this second sub-phase will be the author's professional recommendation, denoted as R2. For acceptability, the author will attempt to further analyze the proposed

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<sup>245</sup> The components of the ADM will be extracted from the literature review as such: current state (Singapore's strategic estimate), problems (drivers of change), and possible futures (case studies on Israel, Taiwan, and Latvia).

solutions from the perspective of the Chief Decision Maker and relevant stakeholders,<sup>246</sup> to produce an improved recommendation, denoted as R3. The third and final phase will be discussed in Chapter 5, and will consider how the improved recommendation can be implemented, using the management best practices of Courtney’s Uncertainty Management Model and Kotter’s Change Management Model, as well as overall conclusions of the thesis.

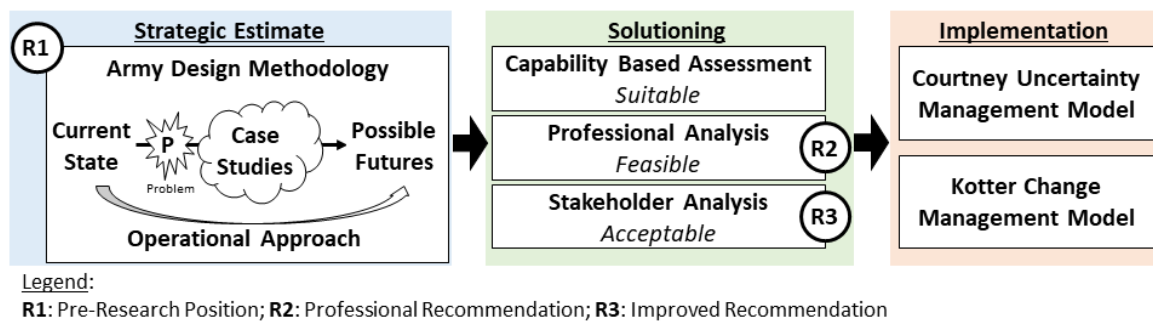


Figure 1. Application of Long’s Applied Professional Case Study Research Method

Source: Created by author.

<sup>246</sup> As per the key elements of the APCS method, this section will seek to answer the following questions: who are the Chief Decision Maker and stakeholders, what are their interests and desired end states, and what are their analytical frames and considerations.

## CHAPTER 4

### ANALYSIS

This chapter will consolidate the literature research in chapter 2 with the identified methodologies in chapter 3 to answer the question of what the future Singapore army should look like. There will be two sections: first, a Strategic Estimate to set the context and develop broad approaches, and a subsequent Solutioning section to identify the most suitable, feasible, and acceptable solution. Analysis within this section will consider both the professional and stakeholders' perspective, with two milestones, R2 and R3, marking the professional and improved consolidated recommendation respectively.

#### Strategic Estimate

##### Operational Approach

As covered in detail in Chapter 2, National Service in Singapore faces future challenges in the forms of rising prevalence of unconventional threats, ascendancy of firepower over mass, and a changing Singaporean demographic that is less amenable to conscription. The strategic end state however remains constant and draws from the first half of the SAF's mission,<sup>247</sup> the enhancement of Singapore's peace and security. The question is then two-fold, first on the relevance of deterrence and diplomacy, and the second on the relevance of conscription in achieving this goal.

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<sup>247</sup> The SAF's mission is to enhance Singapore's peace and security through deterrence and diplomacy, and should deterrence fail, secure a swift and decisive victory.



First, is diplomacy sufficient in itself or is military deterrence still a necessity? To answer this, it is apt to consider the countries that do not possess an army, of which there are at least 25 in the world.<sup>248</sup> The majority are small nation-states whose populations are too small to support one (e.g. Andorra, Monaco, Liechtenstein, Pacific Islands), or whose territory is too large and scattered compared to the available resources to defend (e.g. Iceland and Pacific Islands).<sup>249</sup> These countries tend not to face security threats that require a military response and normally enjoy the umbrella of protection offered by other larger powers (e.g. Costa Rica and Panama, among many other countries in the Americas, are signatories of the Rio Treaty with the U.S.). Geographically, these countries are mainly found in Europe, in the Caribbean Basin and in the Pacific Ocean, with notably none found in Asia. Singapore does not fit in the abovementioned categories. Despite its relative small size, it has a sizeable population and a robust economy that have been proven able to sustain a credible defense over the last fifty years. The Southeast Asia region has also been historically fraught with inter-state conflicts, many of which are still unresolved. After the dissolution of the Southeast Asia Treaty Organization (SEATO) in 1977,<sup>250</sup> there have also been no other regional collective defense frameworks, a fact that is likely to persist due to the competing influence

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<sup>248</sup> Christophe Barbey, *Non-Militarisation: Countries without Armies* (The Aland Islands Peace Institute, October 2015), 29.

<sup>249</sup> *Ibid.*, 31-35.

<sup>250</sup> SEATO was a U.S.-led defense treaty between the Western powers and Thailand and Philippines to contain communism in Southeast Asia. However, it fell apart because members did not feel that their real security concerns were being addressed and the non-inclusion of most Southeast Asian states.

between U.S. and China in the region. Moreover, the non-interference principle enshrined in the ASEAN Way encourages self-reliance especially regarding security matters. Given these factors, there is little impetus for Singapore to gamble its hard-earned economic success by relying solely on diplomacy without a military instrument to back it up, especially if it has the means to support one.

How then should Singapore utilize its military instrument? As demonstrated in Taiwan's example, the military's posture can lie somewhere on the spectrum between offense and defense. To define it simply, a military focused on offense is one that takes pre-emptive aggressive measures to achieve the state's political ends, while a military focused on defense reacts to aggressive actions and focuses on inflicting sufficient damage on the invader so as to repel the invasion. On the other hand, a military focused on deterrence lies somewhere in between, having the object to ward off aggression by demonstrating the futility of a would-be invader's intentions. In deterrence, the political end is to not even enter war, to win without fighting as described by Sun Tze as being the acme of warfare.<sup>251</sup> Singapore, being a small country with limited natural resources and heavily dependent on global trade, cannot afford to adopt an overly offensive posture that would risk its economic lifelines and degrade its international reputation. In fact, only Great Powers with their immense resources and global political clout can dare to adopt such a posture. At the same time, Singapore's small territorial size and high population density implies a lack of strategic depth, which makes a wholly defensive posture

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<sup>251</sup> Sun Zu, "The Art of War," in U.S. Army Command and General Staff College, *H100 Syllabus and Book of Readings* (Fort Leavenworth, KS: USACGSC, July 1992), 443-450.

untenable as well. As demonstrated during the Second World War, Imperial Japan took only a week to invade and control the entirety of Singapore. Given that these strategic realities are likely to be enduring and immutable, a deterrent posture will hence continue to remain as the most apt for Singapore's military instrument, to complement the pillar of diplomacy in enhancing peace and security.

The second part of the question offers more flexibility and will be the crux of this chapter. Given the need to achieve deterrence, is conscription the best way to do so? In this aspect, the premise for a large land force should first be considered. Is it possible to still achieve deterrence with a smaller land force? Other than universal conscription, are there other viable ways to build up an army? The case studies from Chapter 2 will provide insights here on how other similarly placed countries have done so.

As such, the operational approach can be summarized as follows, while adopting the Ends-Ways-Means framework. Given the object of achieving deterrence (Ends), how does the size of the army (Ways) affect the achievement of so, and what alternatives to conscription (Means) can a state use to resource this army? This will also be the basis for assessing the Suitability of solutions, in that a Suitable solution will be one that achieves deterrence amidst the identified future challenges, but not necessarily being confined to the status quo of requiring a large army through universal conscription.

### Possible Futures

The case studies in Chapter 2 suggest three possible models for consideration: (1) a cadre-conscript model à la Israel, (2) an expansible model à la Taiwan, and (3) an All-Volunteer Force à la Latvia. These models have been chosen based on the similar circumstances that these three countries face in relation to Singapore, in the sense that

they are relatively young and small democratic states, sharing borders with larger neighbors in regions historically fraught with conflict, and rely on deterrence as a significant component of their security strategy. The key characteristics of each model, as well as how each contributes to deterrence, will be discussed in this section.

Israel's cadre-conscript model is the current basis for Singapore's army given that the SAF's early designs had been modeled after it. The key intent of this model is to maintain a sizeable standing force with the capacity to mobilize a large reservist force quickly. Within this model, conscripts comprise the bulk of the standing army, with regulars serving as cadres to train and lead these conscripts, and subsequently reservists, in operational combat units. Given the need for conscripts and reservists to fill operational combat roles, the conscription period will need to be considerably long to allow training of advanced unit-level competencies, which will then need to be maintained throughout the reservist period. This enables a moderately-large standing force to undertake peacetime operational duties and react to contingency operations. In such a system, conscription may be applied selectively based on need, but given the significant liability imposed on the individual, universal conscription may be the preferable option to mitigate perceived inequity. Deterrence is achieved through this moderately-large and relatively well-trained standing army, with the attendant ability to mobilize a much larger task-organized reservist force on short notice.

The expansible model takes reference from Taiwan's current force structure which retains a sizeable reservist component in addition to a volunteer standing army.<sup>252</sup>

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<sup>252</sup> Taiwan's politicians have committed to transiting fully to an All-Volunteer Force but this political promise has been repeatedly deferred.

This model seeks to achieve deterrence primarily through a robust defense, and is premised on possessing the credible ability to inflict considerable damage on an invader. As such, this calls for a firepower-heavy operational approach with less emphasis on maneuver elements to secure terrain. Should the enemy's invasion still be successful, a large predominantly infantry-based force will serve as the second line of defense, exploiting natural and urban terrain to deny successful occupation of the territory. In such a model, quality, and not size, of the standing force matters, and thus should be manned by volunteers as far as possible. Conscript remains relevant but primarily to supply the reservist force which would be mobilized only in the emergency need to defend the homeland. Given the reduced complexity of defensive operations compared to offense, conscript training can be shortened to focus on small-unit level competencies, or even deferred till mobilization if a credible ability to delay invasion exists. If the liability to the conscript is negligible enough, conscription may be applied selectively without perception to societal inequities, especially if conscription can be viewed to confer positive benefits. Deterrence is achieved in a two-fold manner. First, the all-volunteer standing force, though smaller than the cadre-conscript model, is likely to be well-equipped with a suite of Anti-Access and Area Denial (A2AD) capabilities to deter invasion and also to buy time for mobilization. Second, the large reservist corps, though equipped with rudimentary skills, will prove a formidable obstacle in defense, especially in an urban environment, and cause a great deal of frustration for would-be invaders. However, given the lack of force projection and maneuver capability, such a force will not be able to mount a credible threat to deter intimidation by an aggressor, and must rely on diplomacy and other instruments of national power to achieve so.

The All-Volunteer Force (AVF) model is based on Latvia's example, a small country with no independent capability to mount an effective deterrence or defense. AVF militaries belonging to populous and prosperous countries, such as the U.S. or India, while interesting are not useful comparisons due to the significant variance to Singapore's context. The central idea of the identified AVF model is to rely primarily on some institution of collective defense, with its volunteer army serving the political function of securing the said institution and the operational role to buy time for the collective defense to materialize. The size of this volunteer army hence does not need to be large, and conscription is not necessary if society is agreeable to the required taxation to fund recruitment and retention efforts. With all members of the military being enlisted due to personal choice, this is the most economically efficient solution, as individual opportunity costs and social costs are minimized. Similar to the expansible model, the AVF force will be well-equipped and well-trained, albeit much smaller. Deterrence is achieved primarily through the institution of collective defense. In Latvia's example, NATO offers this reassurance. However, deterrence through collective defense should be seen through the lens of the region as a whole and not just individual countries. While NATO's ability to deter and repel Russian aggression from Europe is widely accepted, critics contend that the same level of optimism may not be for the Baltic states on the frontline.<sup>253</sup>

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<sup>253</sup> David A. Shlapak and Michael W. Johnson, *Reinforcing Deterrence on NATO's Eastern Flank* (Santa Monica, CA: RAND Corporation, 2016).

## Solutioning

### Key Capabilities and Enablers

This section will consider the three possible futures in detail, to identify the key capabilities that would enable these futures to be considered Suitable, in Singapore's context and in light of the future challenges as highlighted in Chapter 2. This analysis will resemble an abbreviated Capabilities Based Assessment (CBA) while keeping the discussion at the conceptual-level, focusing on the capabilities required (Functional Area Analysis).

### Cadre-Conscript Model

This model achieves deterrence through its ability to generate and sustain a large standing force, and if necessary, mobilize a large proportion of society in defense. Being primarily reliant on mass for deterrence, this model is highly susceptible to the effects of the future trends.

Unconventional and asymmetric threats are the anti-thesis of large scale combat, conducted deliberately in the "gray zone" below the threshold of war, with the object not being invasion but intimidation. In this regard, a cadre-conscript army does not perform well against such amorphous threats. Mass is not as relevant as flexibility and attaining a decisive victory may not even be possible. The type of competencies required will also be different, with greater demand for specialized skills that conventional forces typically do not bring. To deal with such threats, the standing force will need to include specialized forces that are trained and equipped appropriately. This role has traditionally been performed by regular forces, due to the non-linear nature of the skills required that necessitate long and specialized training. As such, this will require diverting some regular

cadres to such roles, or expanding the regular corps. However, conscripts may also be able to contribute meaningfully to such operations. Firstly, not all tasks require specialized training. For example, counter-insurgency operations may need to be performed by highly skilled regulars, but conscripts can still establish basic perimeter security and conduct deterrence patrols. Similarly in the cyberspace domain, to be an expert in cyber forensics and hacking may require extensive training and experience, but the large volume of monitoring and reporting work is relatively simple and can be done without needing much experience. Hence, being able to compartmentalize tasks will be important. Secondly, some of the specialized work can be undertaken by promising conscripts with inherent talent. For example, conscripts with white hat hacking experience or mass communication backgrounds. The primary challenge will be whether these conscripts can practically acquire the necessary experience in the short period of time while balancing the economic costs of longer training. To cater time for specialized training, the training duration for these selected conscripts could be extended while offering certain desirable benefits, such as college opportunities, to mitigate inequity. The Israeli Defense Force's Talpiot program is an example of this, which selects a handful of promising conscripts and gives them the most intensive technology training that the universities and the military has to offer.<sup>254</sup> In return for a longer service duration, these soldiers work on developing innovative technological solutions to complex problems faced by the IDF. The prestige of being in the Talpiot program is well-known in Israeli society, and many of the graduates go on to join some of Israel's most successful

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<sup>254</sup> Senor and Singer, "Harvard, Princeton, and Yale," 70-83.



technological companies after military service. While it can be argued that such a program would work equally as well with volunteers, a cadre-conscript model possesses the inherent advantage in that it is able to select the best candidates from the entire high school cohort, instead of just those who express interest to volunteer. In addition to the standing force, reservists can also contribute against hybrid threats where appropriate. For example, reservists bring with them useful civilian skills and experience, such as in policy-making, engineering, law, medicine and social work, which would be valuable in peacekeeping and humanitarian operations. A cadre-conscript army introduces diversity, and may prove to be more useful when dealing with hybrid threats than an army focused solely on traditional soldiering duties.

In conventional large scale combat operations, firepower may have larger sway over mass and this trend would pose concerns to rudimentarily-equipped cadre-conscript armies relying on mass. Cost is often the factor limiting wide proliferation of high-technology weapons. If, however the state is able to afford such high-technology weaponry, there is no reason why it should not equip its cadre-conscript army with this equipment and adopt a more effective and efficient warfighting doctrine. Being able to achieve greater combat productivity allows but does not necessitate the reduction of one's force. Given the ease of procuring modern defense technologies in the global market, such advantages can only be considered fleeting at best. A large well-equipped army will still be in a better position than a small well-equipped army. The key challenge for conscript armies is the short training time, as compared to regular forces, which may limit their ability to master high-technology military equipment. In this aspect, the Israeli example proves the contrary, with its citizen army having proved its ability to operate

some of the world's most advanced armor, artillery and air defense platforms. Cadre-conscript armies must hence adopt a highly efficient training system to develop the required competencies in their conscripts in the allotted time. This is a multi-faceted approach, requiring enlightened learning pedagogies, instrumentation, simulation, and dedicated training resources to accelerate learning. Military platforms and equipment should also be customized to facilitate quick learning by conscripts and reservists. This can take the form of assistive automation and artificial intelligence, human-machine interfaces that are familiar to civilian technologies, and use of commercial off the shelf technologies where possible. In terms of the skills required to conduct information-age warfare, conscripts will need to learn to handle large volumes of information. The ability to multi-task and sense-make large swathes of information will be crucial. Technical skills to operate and repair the growing mechanized fleet will also grow in importance. With wider and deeper proliferation of information and strike capabilities, leadership competencies may also need to evolve to one that empowers and facilitates disciplined initiative, or mission command.

The third trend of a changing Singaporean demographic has direct impact on its cadre-conscript army. The declining birthrate and shrinking citizen populace behooves the SAF to adopt a highly combat productive warfighting doctrine, one that reduces its reliance on mass to achieve deterrence and operational victory. At the same time, conscripts have higher expectations of their NS experience and seek value from their military service. In this aspect, this complements the implications of the first two future trends. Singapore's cadre-conscript army must be highly efficient, in its warfighting doctrine and its training. To achieve so, it will need to incorporate high-technology

systems, which would then place emphasis on the development of skills in its conscripts so that they are able to operate them effectively. These skills, both technical and “soft,” will have the added benefit of being useful to the individual after he transits into the civilian workforce and also serve to strengthen the national economy. In this regard, the cadre-conscript army serves not just to train citizen soldiers, but also as a cog in the larger national ecosystem of economic development, in addition to its pre-existing role in nation building as a melting pot for the different socioeconomic groups. In addition, given that civilian manpower is central to the cadre-conscript army’s ability to achieve deterrence, sustaining public support for conscription will be critical. In this regard, given the increased sensitivities of the public to casualties, training safety standards must be held to a very high degree, to provide assurance and confidence.

### Expansible Model

The expansible model distinguishes clearly the responsibilities between regular and citizen soldiers. Regular soldiers will be primarily responsible for deterrence through its ability to repel an invader, and also to train conscripts and reservists to perform their defensive role. Given the divergence in responsibilities, an expansible army will be affected quite differently compared to a cadre-conscript army. In this analysis, it will be assumed that a large reservist corps remains critical in defense, and as such, conscription albeit of a much shorter duration,<sup>255</sup> will still be required to supply the reserves, similar to Taiwan’s example.

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<sup>255</sup> Given the limited objective of building up reserves for a defensive role, conscription need not be longer than six months in duration.

The task of dealing with hybrid threats will most likely fall squarely on the regular corps, as the short conscription period will not allow time for specialized training. Training and equipping regulars for these tasks is not expected to present a significant challenge. However, unlike the case for cadre-conscript armies, the expansible army will not be able to augment their regulars with conscripts and thus may require channeling significant numbers of regulars, from their traditional role of trainers for the conscripts and reserves, to address the hybrid threats. To not compromise both these roles, an expansible army will need to enlarge its regular corps to accommodate the increased load.

The increasing trend of firepower fits well into the narrative of an expansible army. Given its considerable smaller size than a cadre-conscript army, it will be limited in its ability to project deterrence through maneuver, and so will rely heavily on standoff capabilities to deter would-be invaders. Adoption of such high-technology weaponry that enhances its ability to do so would thus be imperative. As in Taiwan's case, this takes the form of a significant arsenal of standoff strike weapons and obstacles, to complement similar A2AD efforts in the air and maritime domains, to deter any would-be invader from successfully crossing the Taiwan Straits. However, as discussed in the previous section, operating these high-technology systems may require deeper specialization and technical expertise. Being able to recruit the right quality manpower at sufficient quantity will be the key challenge. In this regard, expansible armies are disadvantaged in that they are only able to select from those who are interested in a military career, as compared to a cadre-conscript army which is able to select promising conscripts from the entire high school cohort. Recruitment challenges may not be trivial. Since it changed its policy to rely less on conscripts, the Taiwanese military has not met its recruitment targets, which

has led to the repeated deferral of the promised transition to a full AVF model.<sup>256</sup> As referenced from the U.S.' experience following the abolishment of its draft in 1973, overcoming manning problems will require offering sizeable personnel benefits at significant expense to the military.<sup>257</sup> An increase in personnel expenses will necessitate a tradeoff against the key competing demand of acquiring and maintaining sufficient platforms and weapons.

In the context of an expansible army, Singapore's changing demographic trends are unlikely to have significant effect. This is because conscription and reservist duties would have already been shortened to impose minimal disruption to daily life, and thus citizens would be unlikely to have significant expectations of their NS experience. However, the shrinking population will pose challenges in recruitment of the regular corps. Tradeoffs to either quality or quantity of regulars may hence have to be made. In addition, pressures on the defense budget will intensify in line with rising social costs due to Singapore's rapidly aging population. In face of budgetary pressures, states with expansible armies may need to temper its security posture to focus even less on deterrence and more on defense. This can take the form of shifting investments in manpower and materiel from maneuver to strike, and accepting greater risk either against hybrid threats or in conventional defense.

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<sup>256</sup> Jason Pan, "All-Volunteer Military Plans Postponed," *Taipei Times*, 27 August 2015, accessed 9 February 2019, <http://www.taipetimes.com/News/front/archives/2015/08/27/2003626274>.

<sup>257</sup> Moskos, "Making the All-Volunteer Force Work: A National Service Approach," 3.

### All-Volunteer Force Model

There are two main variants of the All-Volunteer Force (AVF) model. The first is that belonging to a populous and prosperous nation, which has the means to man and finance a large modern AVF army, such as U.S. and India. This is not a relevant model for Singapore, which has one of the smallest populations in the region, and cannot afford the manpower to field a standing volunteer force comparable in size with its regional neighbors. The second and more applicable variant is that of a small nation which lacks the means and political will to field a sizeable force vis regional threats. In such cases, reliance on collective defense and diplomacy is the only realistic option. This is Latvia's example, which will be the model considered, where its AVF military serves primarily as a political instrument to guarantee NATO's commitment to their national defense.

This small AVF model is ideal in dealing with hybrid threats. Comprising just a small corps of regulars, it is able to react quickly and flexibly to emerging threats, retraining their regulars and procuring materiel and technologies as appropriate to the situation. However, being a small force, the AVF military cannot be prepared for every kind of hybrid threat, and will need to work with its partners. It is thus prudent that the state considers niche areas where it has inherent advantages or where the need is greatest so as to maximize its contributions. In NATO's example, this is manifested through the establishment of functional Centers of Excellence in different member states, to allow deeper specialization and enhance collective effectiveness. For example, Estonia has capitalized on its extensive cyber security expertise, after being one of the first countries to undergo "cyber war" with Russian-backed groups in 2007, to take the lead for NATO's cyber defense operations.

In conventional defense, small AVF armies are not able to independently deter or repel larger aggressors without support from its partners. As such, they have two responsibilities. First, it needs to secure the commitment of the alliance. This is achieved through contributions in support of the alliance's interests, for example, Latvia and the Baltic states strongly supported the U.S.-led coalition in Iraq in 2003, even before it joined NATO, and later contributed forces to serve under the coalition command. Against hybrid threats, the key would be to maximize the value of contributions by focusing troops and technology in niche areas of comparative advantage. Second, it needs to buy time for the full weight of the collective defense to be mobilized against the invader. Similar to the expansible model, this emphasizes standoff capabilities to deter, if not delay, invasion. In addition, providing training spaces within the territory for the alliance will allow a forward presence for more responsive and effective deterrence.

Applying the AVF model to Singapore's context, it would be least affected by future demographic trends, given its sole reliance on a small group of volunteers and not citizen soldiers. However, should defense budgetary pressures due to rising social spending costs be sufficiently severe, policy considerations on the scale of contribution to the alliance may need to be considered.

### Summary

With the incorporation of certain capabilities, all three models can be suitable solutions to address Singapore's future challenges and achieve deterrence. However, the degree to which deterrence can be attained will differ between each model. Some prerequisite enablers will also be more challenging to realize than others. The subsequent section will consider these factors to determine the feasibility of each solution.

Table 3. Key Capabilities Required to Address Future Challenges

	Hybrid Threats	Superior Firepower	Changing Demographics
<b>Cadre-Conscrip</b>	<ul style="list-style-type: none"> <li>• <i>Organization</i> comprising regulars and selected conscripts specialized against hybrid threats</li> <li>• <i>Train</i> conscripts and reservists to perform peripheral supporting tasks</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire high-technology warfighting <i>materiel</i></li> <li>• Efficiently <i>train</i> conscripts and reservists to operate sophisticated systems in an information-age environment</li> <li>• Inculcate mission command <i>leadership</i> philosophy to facilitate decision-making</li> </ul>	<ul style="list-style-type: none"> <li>• Adopt combat productive warfighting <i>doctrine</i></li> <li>• <i>Train</i> and develop economically relevant skills in citizen-soldiers</li> <li>• Enforce strict training safety <i>policies</i> to sustain public confidence</li> </ul>
<b>Expansible</b>	<ul style="list-style-type: none"> <li>• <i>Organization</i> and equipping of specially trained regulars to handle hybrid threats</li> <li>• Expand recruitment of regular <i>personnel</i> headcount to accommodate increased load</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire high-technology warfighting <i>materiel</i></li> <li>• Increase <i>personnel</i> spending in order to attract quality volunteers to operate sophisticated systems</li> </ul>	<ul style="list-style-type: none"> <li>• Rising budgetary pressures may necessitate <i>policy</i> tradeoff in security posture and operational outcomes</li> </ul>
<b>All-Volunteer Force</b>	<ul style="list-style-type: none"> <li>• <i>Train</i> and equip regulars accordingly based on need and priorities of the alliance</li> </ul>	<ul style="list-style-type: none"> <li>• Acquire warfighting <i>materiel</i> in niche areas of comparative advantage, with focus on standoff capabilities</li> <li>• Provide training <i>facilities</i> to allow establishment of forward presence</li> </ul>	<ul style="list-style-type: none"> <li>• Rising budgetary pressures may necessitate <i>policy</i> shifts in contributions to the alliance</li> </ul>

Source: Created by author.

NOTE: Relevant DOTMLPF-P categorizations are italicized.



## Professional Analysis and Recommendation

In this section, the author will attempt to apply his professional analysis and experience from being a field-grade officer in the SAF to assess the feasibility of the proposed solutions and recommend a solution that would be best in line with the SAF's objective, that is, to achieve deterrence.

### On the Object of Deterrence

It will be useful at this stage to further unpack the understandings of deterrence that will be fundamental to the analysis. First, deterrence will continue to be the basis of Singapore's overall military strategy, as opposed to defense, as it is a small city-state with no strategic depth and does not have the luxuries of time and space to mobilize a successful defense only upon receiving attack. As encapsulated in the SAF's mission statement, deterrence is the primary objective with a successful defense as the secondary. Second, as identified in Chapter 2, within the context of a preventive deterrence strategy, there are two fundamental approaches: deterrence by denial and deterrence by punishment. The former is defensive-oriented to convince an aggressor on the futility of his actions while the latter is offensive-oriented to threaten severe and disproportionate retaliation. Both approaches are not mutually exclusive and can be equally credible if supported by the appropriate means. Third, though the relative affordability of a nuclear deterrence may be tempting, pursuing such a strategy in the regional context of non-nuclear armed Southeast Asia will be highly destabilizing, and risks portraying Singapore as a pariah state. As a country that depends heavily on globalized trade and respect for international law, this will be tantamount to economic suicide. Furthermore, the low but possible risk of a nuclear accident will be disastrous to a small country like Singapore.

Thus, conventional deterrence, though costlier and arguably less credible, will be the only viable course of action for Singapore.

In considering the appropriate means to achieve Singapore's deterrence strategy, it will be useful to consider first what deterrence seeks to achieve, namely, the object of national sovereignty. At the basic level, sovereignty requires political control of your physical territory, foremost in the terrestrial domain but also in the maritime and air domains as well. This would follow that there must exist no foreign military powers residing within which that could apply pressure by violence on the political leadership and usurp control, that is, *to prevent military occupation*. The next level would be to safeguard against military actions that inevitably lead to an occupation, that is, *to prevent invasions*. As a country located on the tip of the Malay Peninsula, an invasion of Singapore may come from all three domains of air, land, and sea. The third level would be a broader perspective on deterrence against challenges beyond the physical realm, that is, to include non-military actions that seek to manipulate, destabilize or wrest political control, or to negatively influence society's established "way of life." This may take the form of economic pressures, information operations, insurgencies, and cyber warfare conducted by state and non-state actors. Simply put, this is about *preventing intimidation*. In this aspect, military power will not be the sole means to achieve deterrence and, in fact, may be less effective or efficient than other instruments of national power. Nevertheless, the decisiveness of military power can still be useful in deterring such intimidation, even as a last resort, especially against state and state-like actors. These levels are not mutually exclusive, and it would be most desirable for states to achieve all three, subject to political objectives, societal sensitivities, and the state's available means.

First, in seeking to deny occupation, a nation focuses its effort into frustrating the invader's ability to consolidate gains and making long-term occupation untenable. This could take the form of freedom fighters and partisan forces exploiting terrain and conducting small-scale and disparate attacks to attrite the will of the occupation force over time. As demonstrated by Spanish partisans during Napoleonic France's occupation of the Iberian Peninsula, such bleeding attacks can be effective even against a much larger and superior invader. To be effective, the ability of the people to rise up against an occupation force will be of key importance. Such ability may be manifested through arming and providing basic universal military training to the populace, to establish militias in times of emergency, or even to provide safeguards against the standing army from seizing power as in the case of the U.S.

Second, to prevent an invasion from being successful in the first place, the focus is on defensive capabilities and to attrite the invader's combat power in sufficient speed and quantity so as to deny his ability to occupy the territory. This will require defensive and offensive tactical actions, usually with standoff capabilities to provide early warning and disrupting the attack, and maneuver forces to launch counterattacks. To be successful, early detection of an impending invasion is key to providing the necessary reaction time for a defense to be deployed, and will largely depend on the geographical proximity of the threat, balanced against the efficacy of the state's detection capabilities. Generally, a lower reaction time available would need to be compensated with larger standing forces and complemented with the ability to mobilize reserves on short notice.

Where the first two levels seek to preserve a nation's physical sovereignty and generally focus on deterrence by denial, the third seeks to reinforce the very notion of its

sovereignty by threatening retaliatory actions. While military power is considerably too blunt and should not be used as the first resort, having such a backup will enhance the credibility of a state's use of its other "softer" instruments of national power. As U.S. President Theodore Roosevelt once said, "speak softly, and carry a big stick, you will go far."<sup>258</sup> This deterrence by punishment approach will require offensive capabilities that project the credible threat to deal a disproportionate level of destruction so as to dissuade aggression, such as massed artillery, long-range ballistic missiles, sizeable armor formations, and in the future, cyber weapons of mass destruction.

#### Analysis: Cadre-Conscript Model

The cadre-conscript model maintains a large standing force, with the option to mobilize a much larger reserve force relatively quickly. Though these forces will comprise of mostly citizen-soldiers, such an army can still develop significant offensive and defensive capability to deter invasion, and even intimidation, given adequate training and equipping. It would also be effective in deterring against occupation, given the preponderance of citizens who would have received military training.

Against the future trends of hybrid threats, increasing firepower, and changing demographics, the cadre-conscript model seeks to draw strength from its conscripts and reservists. Citizen-soldiers will be trained and deployed where practical in defense against hybrid threats. Training will be enhanced and made more efficient to ensure that they will be able to master the increasingly sophisticated military systems. Policies will

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<sup>258</sup> Theodore Roosevelt, "Gambling and Vice in the State Capital," *The Brooklyn Daily Eagle*, 1 April 1900, 39.

be put in place to ensure training safety and provide value to the individuals to mitigate concerns. In this approach, the key risk will be whether conscripts and reservists indeed have the ability to cope with the added responsibilities and the necessary training that goes along with them. Time will be the primary challenge, as public pressures to reduce conscription duration and reservist commitments are likely to increase due to the highly competitive nature of Singapore's economy. In the absence of imminent threat of armed conflict, it will be politically unpalatable to extend service durations for additional training. As such, achieving greater training efficiency will be an imperative. This will be a challenge given that training resources are a premium in land-scarce Singapore and a judicious combination of local, overseas and virtual training will have to be utilized. To properly equip conscripts with information-age warfare skills and to operate sophisticated systems will also be a challenge given the limited time. One possibility is to instead inculcate some of these skills, especially those that would be useful in civilian application, in the schools. This increases the baseline quality of all enlistees and facilitates learning of advanced concepts during National Service. The inculcation of skills during National Service that are transferrable to civilian jobs will be useful in creating value for conscripts, and will also serve to strengthen the national workforce and economy. This may be possible due to the cadre-conscript army's inherent advantage of nationalizing security, granting political leeway to enact policies that can achieve multiple national objectives concurrently.

#### Analysis: Expansible Model

The expansible model will comprise a large regular standing force, that is highly trained to operate advanced weaponry, as well as a very large citizen reserve militia

equipped with basic military skills. This force can develop significant offensive and defensive capabilities, and will be well-positioned to deter against occupation, invasion, and intimidation by potential aggressors.

The key challenge would be growing the regular force to the desired size with the required quality. In Singapore's case, this will be especially challenging given the tightening labor market due to declining citizen birthrates. In addition, Singapore's cadre-conscript military today already constitutes 64.2 per 1000 capita of its population,<sup>259</sup> the highest amongst ASEAN members and one of the highest in the world. Coupled with a trend of historical low unemployment rate, recruiting sufficient volunteers to fill up the roles currently being held by conscripts will hence be very challenging, even with increases to personnel expenses. As such, should Singapore adopt an expansible model, it would have to consider practical tradeoffs to its security policy, such as making do with a much smaller force. This would affect Singapore's credibility to deter against intimidation, and it may be forced to accept just achieving the ability to deter invasion through a well-equipped standing army with standoff capabilities, and to deter occupation through a sizeable reservist corps. In reference to Loo's figurative representation, this would be a reversion of Singapore's defense posture from an agile and lethal dolphin to the more passively-oriented porcupine or even the poisonous shrimp.

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<sup>259</sup> International Institute for Strategic Studies, "Singapore," in *Military Balance 2019* 115, no. 1 (London, UK: Routledge, February 2019), 303-305.

### Analysis: All-Volunteer Force Model

The small-state AVF model deters all forms of aggression primarily through military alliance with a larger power. With this as a foundation, the AVF military then serves primarily as an instrument of foreign policy to guarantee the commitment of this alliance.

In order for Singapore to adopt the AVF model for its military, the key assumption is that there must exist a collective defense architecture, similar to NATO or defense treaties with other eminent powers. Such an architecture does not exist in ASEAN and may in fact be antithetical to its central principle of non-interference. There is also the lack of a common threat perception amongst ASEAN member states. Given the increasing contest for influence by U.S. and China in the region, it is unlikely that ASEAN would want to jeopardize the advantages afforded by its neutrality by taking sides too quickly while the outcome of this Great Power competition is not yet clear. Moreover, beneath the amicable relationships within ASEAN continue to exist vestiges of distrust, owing to historical, and some ongoing, territorial conflicts between members, which will invariably take time to reconcile. The absence of a regional alliance or a clear hegemonic power will imply that member states will continue to seek mutual deterrence in this anarchical system. In this regard, a small AVF army that is not backed by a regional hegemon will fail to be an effective deterrent against either intimidation, invasion, or occupation by a larger and determined adversary.

### Professional Recommendation (R2)

Based on the above considerations, the cadre-conscript model remains the most feasible option, followed by the expansible model and then the AVF model. The tweaks

required to make the cadre-conscript model effective against the future challenges are primarily organization and training related, within the military's purview. Key to success will be how the establishment can maximize the contributions from its citizen-soldiers and in turn create greater value for them and society as a whole. The biggest challenge will be ensuring their commitment and willingness to sacrifice their time and energies amidst the rising pressures of a globalized society. On the other hand, the expansible and AVF models would likely require strategic adjustments outside the scope of the military to be successful. For example, a shift to a less ambitious deterrence doctrine and greater reliance on other instruments of national power to achieve security. This may require rebalancing of foreign policy and possibly degrade Singapore's negotiating position for economic matters as well. Budgetary requirements will also shift towards supporting a larger regular force and acquisition of advanced weapons, which in all likelihood based on the U.S.' example,<sup>260</sup> will demand increases to the defense budget, thus adding further strain on other competing social needs or otherwise compel increases in taxation. The key question will be to what extent citizens would be willing to accept these additional social burdens for a reduction in their military obligations. Given the tenuous viability of these political decisions, these two options cannot be recommended in good faith by the military professional.

On the matter of deterrence, the expansible model will be the most capable, followed by the cadre-conscript model and then the AVF model. The expansible army,

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<sup>260</sup> Comptroller General of the United States, *Additional Cost of the All-Volunteer Force*, Report to Congress (Washington, DC: United States General Accounting Office, 6 February 1978), i-iii.



being a large, highly professional standing army, equipped with high-technology weaponry, will have significant offensive and defensive capabilities, able to not just defend Singapore’s sovereignty but perhaps even threaten that of others. Key to success will be long-range precision strike and force projection capabilities that can allow it to advance quickly and dominate the adversary in depth. Other than funding, the central professional challenge will be finding opportunities to train these competencies, given the scarce training resources locally. As for the cadre-conscript army, its reliance on citizen-soldiers will limit its ability to conduct prolonged offensive operations, due to the significant impact of a national mobilization on the economy. On the other hand, a socially mobilized populace equipped with advanced weaponry will still be able to mount a formidable deterrence against invasion and occupation. As for the AVF military under the protection of the larger regional power, its deterrence capability will be highly dependent not just on the regional hegemon’s military capabilities but also its foreign policy and strategic designs for the region.

Table 4. Professional Analysis of Future Force Options			
	Possible Force Options		
	Cadre-Conscript	Expansible	AVF
Feasibility	<b>Yes, within military’s purview</b>	Possible, with moderated domestic policy	Possible, with moderated foreign policy
Deterrent Capability	<b>Strong defense, Limited offense</b>	<b>Strong defense, Strong offense</b>	Dependent on regional hegemon

Source: Created by author.

NOTE: Strengths of each option are denoted in bold.

## Stakeholder Analysis and Improved Recommendation

Following the assessment of Suitability and Feasibility, this section will consider the three possible futures in terms of Acceptability. As per Long's APCSR model in assessing for Acceptability, the analysis will consider the perspectives of the Chief Decision Maker and other stakeholders before making an improved recommendation (R3), that will be the consolidated product of both the professional and stakeholders perspective.

Within this issue, the Chief Decision Maker will be assumed to be the Minister for Defense of Singapore. The Minister for Defense represents the key executive agency responsible for the military security of Singapore, answering directly to the Prime Minister and his Cabinet on all affairs relating to military security. In addition, due to Singapore's system of government as inherited from the British, the Minister for Defense, along with the rest of the Cabinet, is also a politically elected official, being required to stand for election every five years to be first admitted as a member of Parliament. As such, the public's perception of the state of national security as well as his performance as the Minister for Defense thus may have bearing on his chances of getting re-elected. It can be thus concluded that in addition to the traditional concerns of political objectives and foreign policy, the Minister for Defense would also be considerably sensitive to domestic concerns as well.

Based on the above consideration, the relevant stakeholders in this issue will be (1) the Singapore society, consisting of conscripts, their families and employers, and the general voting Singaporean public; (2) the Government of Singapore; and (3) regional neighbors, especially those in ASEAN.

### Analysis: Singapore Society

Since the tumultuous years of independence and the Konfrontasi period, there has been no state-sponsored military violence committed in Singapore, and with warming ties with regional neighbors, the threat of such occurrence in the near future is perceived to be extremely low. The absence of major security threats has thus allowed Singaporeans to focus on economic-related pursuits to improve their material well-being and other higher-order goals. Given the significant cost of living and competitive nature of work in a globalized metropolitan city-state, society generally has a strong work-centric culture, with many domestic issues being viewed from a cost-benefit perspective to the individual. Conscriptio is hence viewed not so much as a privilege of citizenship, but instead accepted, or even tolerated, as a necessary means to achieve economic stability and even as a phase of personal growth and maturation for young Singaporean males.<sup>261</sup>

Viewing the options from such a cost-benefit perspective, it is assessed that Singaporeans would generally prefer the expansible model over the cadre-conscript model, for the fact that the reduction in cost to the individual would be immediate and tangible (two additional years of economic productivity) whereas the added burden of increased taxation, constrained social spending, and a more docile foreign policy would be spread over the rest of society and take time before its effects may be felt. Taxation to cover the increase in defense budget requirements may even be viewed as a more equitable distribution of costs over a larger segment of society, especially over the groups who are currently exempted from military service. The perceived impact will however be

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<sup>261</sup> Chan-Hoong, Wai, and Ho, *Singaporeans' Attitudes to National Service*, 1-3.

contingent on the extent of the increase, and the sources from which tradeoffs in government budget will need to be made. Notwithstanding, given the limited Singaporean manpower pool, it will be highly unlikely that a regular force comparable in size to the current cadre-conscript model can be practically raised and sustained. Being restrained to a smaller army will invariably lead to a reduction in offensive capability and possibly a reversion to a more defensive deterrence model focused just on preventing invasion. The perceived impact of such a policy change is likely to depend significantly on Taiwan's experience going forward, given its geographical, economic, and cultural proximity to Singapore, and if it were able to continue preserving its freedom of action despite a looming China. That the expansible model would continue to require some basic but short mandatory military training for all male citizens would likely be accepted without much complaint in comparison to the current system, as long as it does not impede university matriculation, and perhaps could even be embraced as a citizen's rite of passage and expanded to females as well. As for the AVF model, though it also removes the cost to the individual, its reliance on a larger power or alliance for protection would suggest a degradation in sovereignty which would not be well received by the Singaporean public which has become accustomed to a spirit of independence and exceptionalism.

#### Analysis: Government of Singapore

As with most governments, the Singapore government's *raison d'être* is to ensure the sovereignty of the nation-state. In Singapore's case however, sovereignty is not a natural issue. As a small island-state with no natural resources, the majority of Singapore's history was spent as a collection of fishing villages part of whichever

regional empire and sultanate that was preeminent at that time. The modern concept of Singapore only came with the influx of Chinese, Indian, and European immigrants seeking economic prospects, forming a hodgepodge mix with the indigenous Malays, serving under British, Japanese, then Malaysian governments before obtaining only-recent independence in 1965. This highlights two key characteristics of Singapore's identity: (1) the non-homogenous population which comprises of peoples from different races, cultures, languages, and religions; and (2) that the common thread binding this disparate immigrant people is viable economic prospect. Should Singapore cease to be economically successful, the shallow roots of nationhood will be strained to prevent a brain drain or even an exodus of citizens for greener pastures. If this were to happen, Singapore will lose relevance and clout on the regional and global arena, and may have to one day consider if a union with a larger power would be preferable for survival. Assuming that it is in the best interests of the Singaporean society to prevent such a scenario from occurring, the Singapore government's principal considerations will hence be two-fold: sustaining a strong economy, and strengthening nationalism founded on a unique Singaporean identity to buttress against possible adversities.

The Singapore government would prefer the cadre-conscript model over the expansible and AVF models. The deterrence of threats, whether of a military invasion or intimidation by non-military means, is crucial in ensuring stability which is the foundation of Singapore's economic success. In this regard, a strong army, with powerful offensive and defensive capabilities would be useful, and thus gives merit to the expansible model. However, when considering the secondary but also important objective of nation building, a cadre-conscript model performs better than an expansible model.

Though both models include some form of mandatory conscription, the fact that the expansible model's conscription is designed to be as pain-free as possible suggests that it may not be as effective in engendering commitment. Strong feelings of nationalism come hand-in-hand with some degree of hard work and personal sacrifice, which a painless conscription experience may not be able to produce. In addition, if the dual intent is to also build strong ties amongst the disparate multi-racial populace, this will require time spent in close interactions working together through some level of hardship. A short conscription period focused on building only individual-level proficiencies will thus not be ideal in building these relationships. All things considered, though a cadre-conscript model will not be as effective as an expansible model in deterring aggression, its enhanced ability in nation-building will make it more favorable to the Singapore government in achieving their objectives. On the other hand, the AVF model requires aligning with a larger power and will erode Singapore's neutrality, which has been an important factor behind Singapore's ability to work well as an interlocutor between the East and the West, and thus not be preferable to the Singapore government as well.

#### Analysis: Regional Neighbors

The majority of ASEAN members are recently decolonized states with emerging economies. As such, their national priorities will likely be domestic-focused related to economic development, human capital development, nation building and domestic security. While territorial disputes between members will remain, instruments of international law, diplomacy and consensus-building are likely to be preferred over the use of force, given the dividends of peaceful cooperation that members have come to appreciate over time. While China's military presence in the region is a concern and may

spark a regional buildup of military capabilities, given the significant and growing economic dependence of the region on China coupled with a more inward-looking West, it is unlikely that ASEAN states will be cavalier to use force. Instead, ASEAN will do well to focus on centrality to present a united front in support for international law against larger adversaries. Ensuring domestic stability will likely remain the preeminent concern for majority of Southeast Asian armies, in tackling separatist movements and extremist terrorist groups created along inherent ethnoreligious lines. At the same time, member states will continue to appreciate ASEAN's non-interference policy to allow time and space for respective nation-building efforts.

Viewed from the perspective of Singapore's regional neighbors, it would thus be preferable for Singapore to continue with its cadre-conscript model. While Singapore's defense spending currently outpaces the rest of the region, it is unlikely to provoke alarm and a spiraling arms race as the nature of Singapore's military, comprising predominantly of citizen-soldiers, is an inherent impediment on any possible aggressiveness on Singapore's part. A cadre-conscript army is fundamentally weak offensively, and is not a reliable option for a state with expansionist ambitions, especially for a small state like Singapore that has to rely on universal conscription just to achieve numerical parity with its neighbors. As such, Singapore's large army can be viewed objectively as a defensive deterrent and should thus not pose a significant threat to its neighbors' sovereignty. On the flipside, were Singapore were to adopt the expansible model with a large professional standing force, coupled with a formidable arsenal of modern platforms and weapons, this would most probably be regarded as provocative and destabilizing to the region. Given that regional stability and non-interference is an important consideration for ASEAN

centrality and unity, such a move will jeopardize the fragile anarchical balance in the region. The AVF model will also not be feasible, given the absence of a universally recognized regional hegemon, and the importance of non-alignment which has been key to favorable economic opportunities with both the West and the East.

Improved Recommendation (R3)

Based on the above professional and stakeholder analysis, the cadre-conscript model is the recommended option for Singapore’s army. As a deterrence mechanism, the use of citizen-soldiers, as opposed to regular soldiers, may not be ideal. Though technology and proper training can help to mitigate this shortcoming, a cadre-conscript army, simply due to the fact of having less time and experience, is unlikely to surpass or even match the quality of an all-volunteer army. However, when considered against the other competing considerations of nation building and economic and regional stability, the cadre-conscript model is the most balanced option for the Singapore army’s future force. A summary of the key factors is captured in table 5 below.

Table 5. Summary of Professional and Stakeholder Analysis		
Perspective	Preferred Option	Key Factors
<b>Professional</b>	Cadre-Conscript	Able to address future challenges with tweaks to military structure and training.
<b>Singapore Society</b>	Expansible	Least cost to the individual.
<b>Singapore Government</b>	Cadre-Conscript	Meets dual-intent of deterrence and nation building.
<b>Regional Neighbors</b>	Cadre-Conscript	Does not destabilize regional balance of power.

*Source:* Created by author.



The difference in perspective between the Singapore government (including the military establishment) and the Singapore society on how national security should be achieved will be the main sticking point. Singapore society is going through a transition, as a growing proportion are exposed to and influenced by Western-style liberal thinking and in turn placing greater importance on individual rights, in part due to the embracing of the English language as the medium of choice in the younger generation. As such, younger Singaporeans may become increasingly critical of the government and seek a more active role in policy-making. Assuming that the established Western global order remain intact in the future, and not replaced with an Eastern one with different values, this trend in Singapore is likely to continue and may thus widen the gap in opinion on conscription. It is therefore safe to assume that the cadre-conscript model will not remain sacrosanct for Singapore, and at some point in time under certain circumstances, may require to be changed. The next chapter will consider the uncertainties surrounding the implementation of the cadre-conscript model, the potential challenges that may arise, and if and how changes should be made.

## CHAPTER 5

### CONCLUSIONS

#### Implementation

Notwithstanding the analysis wrought out in the previous chapter, the question of instituting a far-reaching policy such as conscription will have significant uncertainties. It is thus useful to quantify these uncertainties so that an appropriate implementation strategy can be developed. To uncover blind spots inadvertently missed in the military problem solving processes used, business management models introduced by Courtney and Kotter will be used as a framework.

#### Application of Courtney's Uncertainty Management Model

Based on Courtney's four-level classification of uncertainty, this issue can be described as being one of "alternate futures." In this model, the future can be described as one of a few discrete outcomes where information about these outcomes are either known or relatively easy to uncover. This is thus an apt representation of the three futures of the cadre-conscript, expansible, and AVF models which were identified based on the case studies on similarly placed countries to Singapore. Information on these three outcomes, though imperfect, has been assumed to a reasonable degree.

On the strategic posture to adopt, the "adapt to the future" approach is the most appropriate match to an "alternate futures" model, as the reasonably high level of certainty allows some aggressiveness to shape the future, while maintaining some passiveness to reserve the right to play to guard against unexpected developments. Being an adapter, the implementation strategy will take the current industry structure and future

evolutions as a given, while pre-empting any opportunities that may come. Key to success will be the speed of recognizing and responding.

Following on from this strategic posture, the portfolio of actions will include all three types: (1) no-regrets moves, which are decisions that will most certainly reap benefits no matter what happens; (2) options, which are decisions to secure big benefits in best-case scenarios while minimizing losses in worst-case scenarios; and (3) big bets, which are large commitments that will result in disproportionately large benefits in selected scenarios but potentially suffer equally large losses in others. In this analysis, the measure of “beneficiality” will be how well an action contributes to the mission of deterrence, while keeping within the boundaries of what is deemed suitable, feasible and acceptable.

### No-Regret Moves

These actions would be generally long-standing efforts that contribute to strengthening the institution of NS in Singapore, and while they may take a long time to reap tangible results, they should be well-accepted by society, government and regional neighbors with no significant downsides to them. These include Policy efforts such as influencing the national education syllabus upstream to train students in useful skills not just for the future economy but also for the future army; enhancing training safety to strengthening public trust and confidence in NS; and introducing civic education for conscripts, covering topics such as history, current affairs and geopolitics, to imbue citizen-soldiers with the cognitive and emotive motivation to remain committed in their service.

## Options

Options are cautious investments that seek to hedge against risk. In this case, these actions would be predominantly in the Organization, Training and Materiel domains, and though they would also require a considerable amount of time for implementation, they can be calibrated along the way to manage risk. In Organization, the Singapore army should expand its regular corps both in numbers and in scope, to address the rising prevalence of hybrid threats in addition to its duty to train the conscript force for conventional operations. To attract volunteers with the necessary specialized skills, monetary incentives and salaries would need to be comparable with the competitive private sector. Alternatively, academic scholarships and career opportunities should be given to promising conscripts, with the option of retaining them in their roles as reserves after their contractual obligations. The magnitude of expansion of the regular corps should be calibrated based on the perceived threat level and additional cost of doing so. In the domains of Materiel and Training, the Singapore army must acquire and operate sophisticated equipment in order to enhance its combat productivity given declining citizen birthrates. To ensure that the citizen-soldiers are able to attain the greater level of proficiency needed to operate such equipment within the same amount of time, the training system must be made more efficient. This will require judicious use of training resources in the live, virtual, constructive domains. In pushing for greater combat and training efficiencies, efforts must be calibrated to ensure that overall combat effectiveness is not compromised.

## Big Bets

These actions have the potential to reap significant reward but at a high risk, and should thus be carefully chosen. For this case, these actions are mostly in the domains of Doctrine and Policy and can have significant downstream impact on the rest of the army. In Doctrine, the plan to use conscripts and reservists to address hybrid threats can reap high payoffs as it would reduce the requirement on regular soldiers. However, there are real challenges in training the required competencies in them as the significant amount of time and flexibility needed to address the wide-range of threats will be difficult to systematize. At the same time, training must be rigorous enough to avoid tokenism without any real effectiveness. The heightened risk to personal safety (for example in conducting counterterrorism operations), and more importantly, society's acceptance of it, will need to be considered in the context of employing citizen-soldiers. In terms of Policy, the efforts to develop economically useful skills in conscripts can significantly improve society's perceived value of NS and thereby strengthen their support for its preservation. However, such efforts risk detracting from the fundamental principle of NS, being to address the critical need of security, and may backfire if taken too far, leading to even worse societal support for NS. To prevent this, every moment of NS should be spent geared towards the fulfilment of the SAF's mission, and more importantly must be perceived by conscripts and society to be so. The inculcation of economically useful skills and other intangible value-adds of NS should remain opportunistic and secondary, to avoid any degradation in the perceived relevance of NS in contributing to the critical need of national security.

Table 6. Portfolio of Actions to be Implemented		
No-Regret Moves	Options	Big Bets
<ul style="list-style-type: none"> <li>• Inculcate relevant skills upstream in national education</li> <li>• Enhance training safety</li> <li>• Strengthen civic education during NS</li> </ul>	<ul style="list-style-type: none"> <li>• Expand Regular corps</li> <li>• Acquire high tech weapons and equipment</li> <li>• Enhance training efficiency</li> </ul>	<ul style="list-style-type: none"> <li>• Train and deploy conscripts and reservists against hybrid threats</li> <li>• Inculcate economically useful skills during NS</li> </ul>

*Source:* Created by author.

### Implementation Challenges

Though the changes to be implemented are relatively trivial compared to a complete shift to another model, there may still be opposition from within the organization and from society at large. Within the organization, there are different groups of peoples with different outlooks. The regulars will be chiefly concerned with the organization, training and materiel changes, and the dilemma of achieving an even higher level of efficiency and effectiveness despite the existing constraints of time and resource. The conscripts and reservists are a microcosm of the Singapore society and will be generally apathetic to these professional concerns and instead be more sensitive to domestic policy adjustments. Finally, policy makers in the Ministry of Defence will be focused on implications to both domestic and foreign policy and how it affects the rest of government. In considering how these concerns may be addressed, the next section will utilize Kotter's model to develop tangible steps to accompany the change process.

## Application of Kotter's Model

The first four steps of Kotter's model focus on the initial process of starting change and thus can be taken together. To establish a sense of urgency, a common way is for the leader to paint out to his organization the threats and challenges identified. While this may work well in a closed hierarchical system such as a commercial company or an AVF army, this would not be as effective in a public organization such as Singapore's cadre-conscript army, especially with a society that seeks greater participation in decision-making affairs. A consultative approach will hence be more useful to develop a collective sense of urgency. The first step therefore is not to establish a sense of urgency but instead to form a guiding coalition comprising members from the general public, in-service conscripts and reservists, military regulars, and policy makers. Next, this coalition should then collectively frame the issue and identify the challenges that would be pertinent to address, and in so doing, develop the vision and broad strategy to achieve so, similar to the process of this thesis. This can be conducted through focus group discussions or town hall meetings over a suitably long period of time of about three to six months. Once a collective vision and strategy is developed, this coalition should then seek to communicate this to the wider populace. Policies that have wide domestic impact, such as employing conscripts and reservists against hybrid threats, can be publicized through the national news channels, taking more feedback from the public along the way. Adjustments internal to the army, such as improvements to organization, training and materiel, can be communicated to the affected personnel via internal briefings, thematic monographs, newsletters, and social media, subject to security classification.

The next four steps relate to the implementation and sustainment of the change process. Being a large organization, it is not possible for the implementation to be tightly supervised. Instead, leaders at the different echelons must be empowered to exercise mission command and execute the necessary changes tailoring them to their respective contexts. It is expected that obstacles will naturally arise, of which there are two key concerns. First, misinformation can threaten to derail the entire process by undermining confidence in the desired end state and the strategy to achieve such. This may be caused by overzealous leaders at the lower echelons making false assumptions without bothering to clarify or perhaps oversimplifying the issue. To avoid this, it is important to have “brief-back” sessions where junior leaders confirm their understanding of the plan with their superior to ensure coherence. The other case could be deliberate falsehoods by critics, whether internal or external, who are already predisposed against the establishment and seek to sow discord. Such rumors can be especially damaging to domestic and foreign policy, for example if it was asserted that an enlargement of the regular corps was due to expansionist intentions instead. Actions to correct such falsehoods must hence be swift and decisive, and preferably supported by ground-up voices to lend credibility. Second, mediocre results can quickly sap morale and seed doubt. While it is important to establish suitable Measures of Performance (MOP) and Effectiveness (MOE) early, it is more important to produce early wins to boost confidence. This can be achieved by conducting pilot implementation with a smaller group of participants, with dedicated attention and support from the organization. For example, instead of funneling all conscripts through counterterrorism training and deployment at once, it is preferable to start with just one battalion first, and to conduct in-



progress reviews and post-implementation reviews before considering expansion to the wider army. A dedicated training program for the trainers must also be planned and executed properly prior to this. Once some acceptable level of success has been achieved, it is important to consolidate gains to generate momentum. This can take the form of celebrating early successes, through awards or positive publicity, and dedicated efforts to capture, archive and share lessons from the process. Lastly, it will be important to anchor the changes and best practices into culture. This can be done by instituting cultural artifacts and norms, including desirable values into the personnel rating process, and how awards and disincentives are meted out. As this will invariably take a long time to execute, the change process should be the onus of junior to middle-grade leaders who have sufficient time in service to see through the whole implementation and eventually have the ability to improve the system as necessary.

### Final Thoughts

Given that the author's final recommendation is the continuation of the existing cadre-conscript model with relatively minor adjustments, it may be tempting to assume that there has been little insight on the matter. On the contrary, the thesis has sought to provide a balanced and researched understanding of the issue, with a conclusion that considers the professional perspective as well as multiple stakeholders' views on the issue. At the very least, it has codified the relevant information on this topic and could prove useful to future researchers.

The arrived conclusion is simply the author's best assessed strategy for the current context and is not meant to be final. There are several circumstances that would sway the arguments to favor the expansible or AVF models and future researchers should consider

examining these possibilities in detail. First, should public support for conscription fall below recoverable levels, perhaps due to some disastrous training incident that shatters public confidence or instances of cronyism or nepotism that severely undermine the principle of equity, the expansible or AVF models may prove to be more attractive given the more bearable cost to society. If the SAF intends to preserve the institution of NS, it must proactively and aggressively deny these “black swans” (or even “black elephants”<sup>262</sup>) from appearing. Second, the supposed arrival of the Asian century<sup>263</sup> may change the nature of geopolitics significantly. While the current Western global order has been a major factor contributing to the rise of Asian superpowers, there is no guarantee that they will continue with the same trajectory when they are at the helm. Should China seek an aggressive domination of influence in the region harkening back to its tributary past and if there is a breakdown in the balance of power in the region, ASEAN’s centrality will be significantly strained. In such a scenario, it may be advantageous for the Southeast Asian nations to forge closer cooperation in economy and security matters, with the possibility of introducing collective security agreements or even resort to bandwagoning with a superpower. The AVF model in this case may become a viable option to reap the peace dividends than the costlier cadre-conscript and expansible models. Third, the trend towards smart cities and increased digitization of municipal services will increase economic interconnectivity within the region, but will also increase

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<sup>262</sup> Peter Ho, “The Black Elephant Challenge for Governments,” *Straits Times*, 7 April 2017, accessed 28 April 2019, <https://www.straitstimes.com/opinion/the-black-elephant-challenge-for-governments>.

<sup>263</sup> Valentina Romei and John Reed, “The Asian Century is Set to Begin,” *Financial Times*, 28 March 2019, accessed 28 April 2019, <https://on.ft.com/2U0wij7>.

the vulnerability against cyber-attack. As cyber weapons become more sophisticated through artificial intelligence, their ability to wreak catastrophic damage on a heavily connected society could even be comparable to nuclear weapons. Given the much lower barriers of entry in the cyber game, it will not be far-fetched to assume that every country could one day have such cyber nuclear weapons in their arsenal. This is not necessarily a negative outcome. It has been evident in history that nuclear-armed countries do not go to war against each other, for the risk of retaliation and mutually assured destruction is high. That these weapons are able to bypass the military defense and threaten the civilian populace directly is arguably immoral, but the deterrent effect is certainly undeniable. If the regional nations are willing to forgo the traditional conventional balance of power for a fragile yet resilient cyber nuclear deterrence, having a large conventional army would cease to make sense. While not on the horizons anytime soon, the rapid pace of development in the computing and artificial intelligence realm today does not rule out such a possibility from occurring.

Finally, this thesis serves as validation for the Applied Professional Case Study Research (APCSR) method as a suitable way to combine professional experience with a research-informed approach in tackling a complex problem. In so doing, it facilitates decision-making by providing useful and balanced advice tailored to the Chief Decision Maker's requirements, informed by relevant case studies and thorough analysis. The author's arrived conclusion should by no means be the key takeaway from this thesis. Instead, it is merely a successful demonstration of the APCSR model which can serve as an example for consideration by other policymakers in tackling similar issues.

## BIBLIOGRAPHY

### Books

- Cohen, Eliot A. *Citizens & Soldiers: The Dilemmas of Military Service*. New York: Cornell University Press, 1985.
- Cohen, Stuart, ed. *Democratic Societies and Their Armed Forces: Israel in Comparative Context*. BESA Studies in International Security. London: Frank Cass, 2000.
- . *The New Citizen Armies: Israel's Armed Forces in Comparative Perspective*. BESA Studies in International Security. London: Routledge, 2010.
- Coker, Christopher Coker. "NATO and Baltic Security." In *Baltic Sea Security: How can Allies and Partners meet the New Challenges in the Region?*, 11. Denmark: University of Copenhagen.
- Collins, Alan. *Security and Southeast Asia: Domestic, Regional, and Global Issues*. Boulder: Lynne Rienner Publishers, 2003.
- Courtney, Hugh, Jane Kirkland, and Patrick Viguerie. "Strategy under Uncertainty." In *Harvard Business Review on Managing Uncertainty*, 1-31. Boston: Harvard Business School Press, 1999.
- Ho, Shu Huang, and Graham Ong-Webb, eds. *National Service in Singapore*. Singapore: World Scientific Publishing, 2019.
- Huxley, Tim. *Defending the Lion City: The Armed Forces of Singapore*. St. Leonards, NSW: Allen & Unwin, 2000.
- International Institute for Strategic Studies. *The Military Balance* 115, no. 1. London: Routledge, 2015.
- Knox, MacGregor, and Williamson Murray, eds. *The Dynamics of Military Revolution, 1300-2050*. Cambridge, UK: Cambridge University Press, 2001.
- Lee, Kuan Yew. *From Third World to First: The Singapore Story, 1965-2000*. New York: HarperCollins Publishers, 2000.
- Loo, Bernard Fook Weng. "Goh Keng Swee and the Emergence of a Modern SAF: The Rearing of a Poisonous Shrimp." In *Goh Keng Swee: A Legacy of Public Service*, 127-151. Singapore: World Scientific Publishing, 2014.
- , ed. *Military Transformation and Strategy: Revolutions in Military Affairs and Small States*. London: Routledge, 2009.

- Murray, Williamson, and Allan R. Millett, eds. *Military Innovation in the Interwar Period*. Cambridge: Cambridge University Press, 1996.
- Paret, Peter, Gordon Alexander Craig, and Felix Gilbert, eds. *Makers of Modern Strategy: From Machiavelli to the Nuclear Age*. Princeton, NJ: Princeton University Press, 1986.
- Parker, Geoffrey, ed. *The Cambridge Illustrated History of Warfare*. Cambridge: Cambridge University Press, 2008.
- Senor, Dan, and Saul Singer. "Harvard Princeton, and Yale." In *Start-Up Nation: The Story of Israel's Economic Miracle*, 67-83. New York: Twelve Grand Central Publishing, 2011.
- Wee, Adrian Jin Kuah. "Goh Keng Swee and Singapore's Defence Industrial Policy." In *Goh Keng Swee: A Legacy of Public Service*, 183-195. Singapore: World Scientific Publishing, 2014.
- Welsh, Bridget, James Chin, Arun Mahizhnan, and Tarn How Tan, eds. *Impressions of the Goh Chok Tong Years in Singapore*. Singapore: NUS Press, 2009.

#### Journal Articles

- Adam, Antonis. "Military Conscription as a Means of Stabilizing Democratic Regimes." *Public Choice* 150, no. 3/4 (March 2013): 715-730.
- Bailey, Beth. "The Army in the Marketplace: Recruiting an All-Volunteer Force." *The Journal of American History* 94, no. 1 (June 2007): 47-74.
- Bacevich, Andrew J. "Whose Army?" *Daedalus* 140, no. 3 (Summer 2011): 122-134.
- Berck, Peter, and Jonathan Lipow. "Military Conscription and the (Socially) Optimal Number of Boots on the Ground." *Southern Economic Journal* 78, no. 1 (July 2011): 95-106.
- Chan, Ching Hao. "The Citizen-Soldier in Modern Democracies: The Case for Conscription in Singapore." *POINTER, Journal of the Singapore Armed Forces* 39, no. 1 (2013): 42-50.
- Chen, York W. "The Evolution of Taiwan's Military Strategy: Convergence and Dissonance." *China Brief* 9, no. 23 (19 November 2009): 8-12.
- Commin G., and E. Filiol. "Unrestricted Warfare versus Western Traditional Warfare: A Comparative Study." *Journal of Information Warfare* 14, no. 1 (2015): 14-23.
- Galston, William A. "Thinking About the Draft." *Public Interest* 154 (Winter 2004): 61-73.

- Giegerich, Bastian. "Hybrid Warfare and the Changing Character of Conflict." *Connections* 15, no. 2 (Spring 2016): 65-72.
- Gray, Colin S. "The Changing Nature of Warfare?" *Naval War College Review* 49, no. 2 (Spring 1996): 7-22.
- Kam, Kai Qing. "The Viability of Deterrence Strategies for Non-Nuclear States." *POINTER, Journal of the Singapore Armed Forces* 44, no. 1 (2018): 11-20.
- Krebs, Ronald R. "A School for the Nation? How Military Service Does Not Build Nations, and How It Might." *International Security* 28, No 4 (Spring 2004): 85-124.
- Lee, Hsien Loong. "The ASEAN Journey and the Road Ahead." *ASEAN Focus*, no. 4/2018 (July 2018): 2.
- Lewis, Adrian R. "Conscription, the Republic, and America's Future." *Military Review* 89, no. 6 (November/December 2009): 15-24.
- Loo, Bernard Fook Weng. "The Armed Forces of Southeast Asia in 2020." *RSIS Commentaries*, no. 110/2009 (November 10, 2009): 1-3.
- . "The (Over?) Promise of Modern Technology." *RSIS Commentaries*, no. 007/2013 (January 15, 2013): 1-2.
- . "Transforming the Strategic Landscape of Southeast Asia." *Contemporary Southeast Asia: A Journal of International and Strategic Affairs* 27, no. 3 (December 2005): 388-405.
- Melcher, David L., and John C. Siemer. "How to Build the Wrong Army." *Military Review*, no. 9 (September 1992): 66-76.
- Moskos, Charles C. "Making the All-Volunteer Force Work: A National Service Approach." *Foreign Affairs* 60, no. 1 (Fall 1981): 17-34.
- . "Reviving the Citizen-Soldier." *National Affairs*, no. 39 (Spring 2002): 76-85.
- . "The All-Volunteer Military: Calling, Profession or Occupation?" *Parameters* 7, no. 1 (1977): 2-9.
- . "The All-Volunteer Force." *The Wilson Quarterly* 3, no. 2 (Spring 1979): 131-142.
- O'Hanlon, Michael. "Why China Cannot Conquer Taiwan." *International Security* 25, no. 2 (Fall 2000): 51-86.
- Ross, Thomas W. "Raising an Army: A Positive Theory of Military Recruitment."

- Journal of Law and Economics*, no. 37 (April 1994): 109-131.
- Setzekorn, Eric. "Military Reform in Taiwan: The Lafayette Scandal, National Defense Law and All-Volunteer Force." *American Journal of Chinese Studies* 21, no. 7 (April 2014): 15-19.
- Shambaugh, David. "A Matter of Time: Taiwan's Eroding Military Advantage." *The Washington Quarterly* 23, no. 2 (Spring 2000): 119-133.
- . "Taiwan's Security: Maintaining Deterrence amid Political Accountability." *The China Quarterly*, no. 148 (December 1996): 1284-1318.
- Stearn, Tom. "The Case for Conscription." *History Today* 58, no. 4 (April 2008): 16-22.
- Tay, Bernard. "Is the SAF's Defence Posture Still Relevant as the Nature of Warfare Continues to Evolve?" *POINTER, Journal of the Singapore Armed Forces* 42, no. 2 (2016): 25-34.
- Vasquez III, Joseph P. "Shouldering the Soldiering: Democracy, Conscription, and Military Casualties." *The Journal of Conflict Resolution* 49, no. 6 (December 2005): 849-873.
- Wither, James K. "Making Sense of Hybrid Warfare." *Connections* 15, no. 2 (Spring 2016): 73-87.

#### Papers/Reports

- Bandow, Doug. *Fighting the War against Terrorism: Elite Forces Yes; Conscripts No*. Cato Institute Policy Analysis 430. Washington, DC: Cato Institute, April 2002.
- . *Fixing What Ain't Broke: The Renewed Call for Conscription*. Cato Institute Policy Analysis 351. Washington, DC: Cato Institute, August 1999.
- . *National Service: Utopias Revisited*. Cato Institute Policy Analysis 190. Washington, DC: Cato Institute, March 1993.
- Braw, Elizabeth. *The Return of the Military Draft*. Issue Brief. Washington, DC: Atlantic Council, February 2017.
- Corum, James S. *The Security Concerns of the Baltic States as NATO Allies*. The Letort Papers for Strategic Studies Institute. Carlisle, PA: US Army War College, 2013.
- Easton, Ian, Mark Stokes, Cortez A. Cooper, and Arthur Chan. *Transformation of Taiwan's Reserve Force*. Santa Monica, CA: RAND Corporation, 2017.
- Elran, Meir, and Gabi Sheffer, eds. *Military Service in Israel: Challenges and Ramifications*. Tel Aviv, Israel: Institute for National Security Studies, 2016.

- Folsom, Roger M. *Can Conscription Work?* Cato Institute Policy Analysis 1. Washington, DC: Cato Institute, May 1981.
- Jorgensen, Henrik J., and Henrik O. Breitenbauch. *What if We Gave Up Conscription?* Denmark: Danish Institute for Military Studies, February 2009.
- Kober, Stanley. *To Reduce Military Tensions in Europe, Ban Conscription.* Cato Institute Policy Analysis 116. Washington, DC: Cato Institute, March 1989.
- Kotter, John P. *Leading Change: Why Transformation Efforts Fail.* Best of Harvard Business Review Reprints, no. R0701J. Brighton, MA: Harvard Business Publishing, January 2007.
- Krebs, Ronald R. "Myths of the All-Volunteer Force: Rethinking Military Recruitment and the Fate of the Citizen-Soldier." Conference Paper on "Citizenship, the Soldier, and the State. Accessed 10 February 2019. [http://users.polisci.umn.edu/~ronkrebs/Publications/Myths%20of%20the%20AVF%20\(complete\).pdf](http://users.polisci.umn.edu/~ronkrebs/Publications/Myths%20of%20the%20AVF%20(complete).pdf).
- Chan-Hoong, Leong, Wai Wai Yang, and Henry Ho. *Singaporeans' Attitudes to National Service.* Singapore: Lee Kuan Yew School of Public Policy, October 2013.
- Mazarr, Michael J. *Understanding Deterrence.* Santa Monica, CA: RAND Corporation, 2018.
- Ng, Pak Shun. "From Poisonous Shrimp to Porcupine: An Analysis of Singapore's Defence Posture Change in the Early 1980s." Working paper no. 397. Strategic and Defence Studies Centre, Australian National University, Canberra, 2005.
- Shlapak, David A. and Michael W. Johnson. *Reinforcing Deterrence on NATO's Eastern Flank.* Santa Monica, CA: RAND Corporation, 2016.
- Wilson, Damon, and Magnus Nordenman. *A US Strategy for Building Defense and Deterrence in the Baltic States.* Issue Brief. Washington, DC: Atlantic Council, June 2016.

#### Government Documents

- Comptroller General of the United States. *Additional Cost of the All-Volunteer Force.* Report to Congress. Washington, DC: United States General Accounting Office, 6 February 1978.
- Headquarters Department of the Army. Army Techniques Publication 5-0.1, *Army Design Methodology.* Washington, DC: Government Printing Office, 2015.
- Republic of China Ministry of National Defense. *2017 National Defense Report.* Taipei City: Ministry of National Defense, 2017.



US Army War College. *How the Army Runs: A Senior Leader Reference Handbook, 2017-2018*. Carlisle, PA: US Army War College, 2018.

### Theses

Chan, Chun Sing. "Whither a Common Security for Southeast Asia?" Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 1998.

Hoo, Iain. "The Singapore Armed Forces: Are Citizen-Soldiers Still Relevant Today?" Master of Military Studies Research Paper, U.S. Marine Corps Command and Staff College, Marine Corps University, Quantico, VA, 2011.

Lee, Yi-Jin. "Singapore's Defense Policy: Essential or Excessive?" Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2010.

Low, Wilson. "Whither Conscription in Singapore." Master's thesis, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 2011.

### Newspaper Articles

Cheng, Kenneth. "Artists seeking NS Deferment need 'Convincing' Proof of Potential." *Today*, 15 November 2013. Accessed 10 February 2019. <https://www.todayonline.com/singapore/artists-seeking-ns-deferment-need-convincing-proof-potential>.

Desker, Barry. "Will Singapore's Collective Spirit Prevail?" *Straits Times*, 13 August 2013 Accessed 10 February 2019. <https://www.straitstimes.com/singapore/will-singapores-collective-spirit-prevail>.

Dickey, Laura. "Taiwan's Struggle for All-Volunteer Force and the Civil-Military Divide." *TheNewsLens*, 6 March 2018. Accessed 10 February 2019. <https://international.thenewslens.com/article/90840>.

Greer, Tanner. "Taiwan Can Win a War with China." *Foreign Policy*, 25 September 2018. Accessed 10 February 2019. <https://foreignpolicy.com/2018/09/25/taiwan-can-win-a-war-with-china>.

Higgins, Andrew. "'New Europe' Is as Skeptical of Iraq War as 'Old Europe'." *Wall Street Journal*, 18 March 2003. Accessed 10 February 2019. <https://www.wsj.com/articles/SB104793603897470700>.

Ho, Peter. "The Black Elephant Challenge for Governments." *Straits Times*, 7 April 2017. Accessed 28 April 2019. <https://www.straitstimes.com/opinion/the-black-elephant-challenge-for-governments>.

Jager, Avi. "The Myth of Compulsory Military Service in Israel." *The Jerusalem Post*, 18 October 2018. Accessed 29 January 2019. <https://www.jpost.com/Opinion/The->

- myth-of-compulsory-military-service-in-Israel-569779.
- Kor, Kian Beng. "Response from Society must not Weaken Support for NS." *Straits Times*, 12 February 2019. Accessed 22 February 2019. <https://www.straitstimes.com/singapore/response-from-society-must-not-weaken-support-for-ns>.
- Lee, Yimou. "For Taiwan's Youth, Military Service is a Hard Sell Despite China Tension." *Reuters*, 28 October 2018. Accessed 10 February 2019. <https://www.reuters.com/article/us-taiwan-military-idUSKCN1N20U3>.
- Lim, Min Zhang. "Why Actor Aloysius Pang's Death Sparked Outpouring of Public Grief." *Straits Times*, 29 January 2019. Accessed 22 February 2019. <https://www.straitstimes.com/singapore/why-actor-alloysius-pangs-death-sparked-outpouring-of-public-grief>.
- Pan, Jason. "All-Volunteer Military Plans Postponed." *Taipei Times*, 27 August 2015. Accessed 10 February 2019. <https://taipeitimes.com/News/front/archives/2015/08/27/2003626274>.
- Romei, Valentina and John Reed. "The Asian Century is Set to Begin." *Financial Times*, 28 March 2019. Accessed 28 April 2019. <https://on.ft.com/2U0wij7>.
- Sander, Gordon F. "Latvia, a Disappearing Nation." *Politico*, 7 January 2018. Accessed 10 February 2019. <https://www.politico.eu/article/latvia-a-disappearing-nation-migration-population-decline/>.
- Schmitz, Rob. "Born Independent. Taiwan's Defiant New Generation is Coming of Age," *National Public Radio*, 20 June 18. Accessed 10 February 2019. <https://www.npr.org/2018/06/20/616083178/born-independent-taiwan-s-defiant-new-generation-is-coming-of-age>.
- Sim, Walter. "Singaporeans See Virtues like Compassion in Themselves but view Society as Materialistic." *Straits Times*, 23 July 2015. Accessed 10 February 2019. <https://www.straitstimes.com/singapore/singaporeans-see-virtues-like-compassion-in-themselves-but-viewsociety-as-materialistic>.
- Staff, Toi. "Bar Refaeli Hit Back at the Army." *The Times of Israel*, 19 March 2013. Accessed 29 January 2019. <https://www.timesofisrael.com/bar-refaeli-hits-back-at-the-army/>.
- Teng, Amelia. "How Singapore's Students Rose to No. 1." *Straits Times*, 24 December 2016. Accessed 10 February 2019. <https://www.straitstimes.com/singapore/education/how-spores-students-rose-to-no-1>.
- Walker, Shaun. "Russia Jails Estonian Intelligence Officer Tallinn says was Abducted over Border." *The Guardian*, 19 August 2015. Accessed 10 February 2019. <https://www.theguardian.com/world/2015/aug/19/russia-jails-estonian-police->

officer-allegedly-abducted-border-eston-kohver.

Wootliff, Raoul. "Early Elections Called for April 9 as Coalition Agrees to Dissolve Knesset." *The Times of Israel*, 24 December 18. Accessed 29 January 19. <https://www.timesofisrael.com/early-elections-called-for-april-9-as-coalition-agrees-to-dissolve-knesset/>.

Xie, Jianyue. "First Batch of Volunteers Enlist into SAF Volunteer Corps." *Today*, 25 March 2015. Accessed 22 February 2019. <https://www.todayonline.com/singapore/first-batch-volunteers-enlist-saf-volunteer-corps>.

### Websites

Atlantic Council. "Stoltenberg Provides Details of NATO's Cyber Policy." 16 May 2018. Accessed 10 February 2019. <https://www.atlanticcouncil.org/blogs/natosource/stoltenberg-provides-details-of-nato-s-cyber-policy>.

———. "Trump Confirms He Threatened to Withdraw from NATO." 22 August 2018. Accessed 10 February 2019. <https://www.atlanticcouncil.org/blogs/natosource/trump-confirms-he-threatened-to-withdraw-from-nato>.

BBC. "Xi Jinping says Taiwan 'must and will be reunited with China.'" BBC, 2 January 2019. Accessed 10 February 2019. <https://www.bbc.com/news/world-asia-china-46733174>.

Edzard, Dietz O. "History of Mesopotamia." *Encyclopedia Britannica*. Accessed 10 February 2019. <https://www.britannica.com/place/Mesopotamia-historical-region-Asia>.

Encyclopedia Britannica. "Killed, Wounded, and Missing." Accessed 10 February 2019. <https://www.britannica.com/event/World-War-I/Killed-wounded-and-missing/>.

Mahbubani, Kishore. "ASEAN: An Unexpected Success Story." Adapted from *The ASEAN Miracle: A Catalyst for Peace*. Accessed 10 February 2019. <https://thecairoreview.com/essays/asean-an-unexpected-success-story>.

Ministry of Defence Singapore. "History." MINDEF Singapore. Accessed 15 October 2018. <https://www.mindef.gov.sg/web/portal/mindef/about-us/history>.

Ministry of Defence Singapore. "Ministerial Statement by Minister for Defence Dr Ng Eng Hen, on National Service Training Deaths and Safety Enhancements for the SAF for Parliamentary Sitting." 11 February 2019. Accessed 22 February 2019. [https://mindef.gov.sg/web/portal/mindef/news-and-events/latest-releases/articledetail/2019/February/11feb19\\_ps](https://mindef.gov.sg/web/portal/mindef/news-and-events/latest-releases/articledetail/2019/February/11feb19_ps).

Pesek, William. "Making Sense of the South China Sea Dispute." *Forbes*, 21 August 2017. Accessed 10 February 2019. <https://forbes.com/sites/outofasia/2017/08/22/>

making-sense-of-the-south-china-sea-dispute.

Royde-Smith, John Graham, and Thomas A. Hughes. "World War II." Encyclopedia Britannica. Last updated 5 June 2019. Accessed 10 February 2019. <https://www.britannica.com/event/World-War-II/>.

Singh, Pritam. ""National Service: Training Safety, Operational Readiness and the Will to Fight - Adjournment Motion." Workers Party, 11 February 2019. Accessed 22 February 2019. <https://wp.sg/national-service-training-safety-operational-readiness-and-the-will-to-fight-adjournment-motionby-pritam-singh>.

Washington, George. "Sentiments on a Peace Establishment." National Archives, 1 May 1783. Accessed 10 February 2019. <https://founders.archives.gov/documents/Washington/99-01-02-11202>.

#### Other Sources

Chiarelli, Peter. "Building Trust through Character and Ethics," Lecture, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 6 November 2018.

Long, Kenneth E. "Emerging Best Practices from Professional Applied Case Study Research." Lecture notes, U.S. Army Command and General Staff College, Fort Leavenworth, KS, 15 September 2016.

Sun Zu. "The Art of War." In U.S. Army Command and General Staff College, *H100 Syllabus and Book of Readings*, 443-450. Fort Leavenworth, KS: USACGSC, July 1992.