

**Alternative methodologies in assessing North Korea's military capabilities: Are we asking the right questions and looking in the right places?**

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**Introduction**

This paper aims to search for alternative methodologies in assessing North Korea's military capabilities. It will see whether the right questions have been asked, and whether analyses to date have been looking in the right places. Specifically, it looks at the ways in which the underlying strengths and weaknesses of North Korea can be used to examine their military capability in the context of effectiveness and efficiency.

Given the lack of reliable primary sources, many have also ducked and weaved away from analysing the drivers and the processes of Pyongyang's defence planning. Indeed, such sources on North Korea are seldom released, and the available data is replete with contradictions and discrepancies making it hard for any assessments to be definitive.<sup>1</sup> However, it is possible to speculate on various constants and variables which serve as "hints". Additionally, North Korea who places great emphasis on ideologies and with a strong set of strategic values will have its own unique strategic preferences. Thus the paper argues that while it may be close to impossible to pinpoint the exact intentions, one can narrow down Pyongyang's strategic options by intentions logically ruling out what they "can't" or "won't do".

The paper will first briefly introduce some of the concepts in strategic planning which could be used in order to assess North Korea's military capabilities and preparedness. The paper will then review some of the methodologies that North Korea observers have used to date, looking at the strengths and weaknesses to their approaches. The third and main section of the paper looks at the constants and variables in North Korea which should be taken into account. It will examine the causative effects of the biases and constraints that to Pyongyang's defence planning.

**Concepts in defence planning**

Strategic planning is studied more by practitioners who seek to analyse the implications of key

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<sup>1</sup>함택영. 2004. "북한 통계자료 분석 및 추정: 경제총량 및 군사비를 중심으로." In 북한연구방법론: 한울아카데미. Pg. 170~192

decisions made effective defence capability management to military readiness and national security.<sup>2</sup> It seeks to determine the link between policy making and its effects on military capability and readiness. The key issue in strategic planning is to see whether a state is managing its defence capability in the most efficient and effective manner. Effective and efficient military management enhances capability, which allows greater leverage not only in terms of the military but also national security.

The majority of the papers in this field have focused on the military institution of the United States and its allies. However, many of the key strategic planning theories utilises logical approaches to analysing military capabilities and are applicable to other states, including North Korea. For example, Hinge's writings give numerous hints that are valuable when studying a state's strategic policy making schema, and the concepts mentioned in his work serves as a useful guide.<sup>3</sup>

One of the key concepts in strategic planning studies is, understanding the structure of the military organisation. Hinge maintains that the actual capability of a nation's defence largely depends on its preparedness, which is composed of two subsystems; operational preparedness (readiness and sustainability - consumption), and structural preparedness (force structure - investment).<sup>4</sup> While it may be mere common sense, it reminds analysts to avoid simplicity about the military institution as a single unit with a single function.

Hinge also covers another important aspect of strategic planning – dilemmas that policy makers face when they attempt to manage their military preparedness. Hinge sets out seven main dilemmas: “guns or butter”, “hot” or “cold” conflict, “invest” or “consume”, “technology mix”, “defend” or “deter”, “sooner” or “later”, “use it” or “lose it”. However, decision making in addressing these dilemmas are not easy. States are often compelled to compromise their preferences because of the constraints and biases that exist and majority of the time, policy makers often get bogged down in this process, which in the end comes at the expense of effectiveness and efficiency in military capability

Constraints could range from those of economic to political in nature. Study of these constraints allows analysts to “narrow down” the decisions that the government will make. Biased

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<sup>2</sup> See: Betts, Richard K. 1995. *Military readiness : concepts, choices, consequences*. Washington, D.C: Brookings Institution.

<sup>3</sup> Hinge, Alan and Australian Defence Studies Centre. 2000. *Australian defence preparedness : principles, problems and prospects : introducing Repertoire of missions (ROMINS) a practical path to Australian defence preparedness*. Canberra: Australian Defence Studies Centre.

<sup>4</sup> Ibid.

decisions often interfere with a state's strategic planning, where proposed policies are often pulled apart and then reassembled by bureaucrats, politicians, community and military elites. In short, such irrational decisions are made to minimise negative implications on their regime or because of interests by other groups.

Structure of the military forces is also crucial, and gives some hints to their capacity to mobilise. Betts outlined the mobilisation time of forces to the force dynamics.<sup>5</sup> What this indicates is that states should format their forces in such a way that is suitable to their threats, geography and type of contingency.

### **Past assessments of North Korea's military capability**

Since the first nuclear crisis in the 1990s, North Korea has come under the spot light. While almost all analysis' dismisses the actual possibility of North Korea successfully invading the South or winning a war against the U.S. alliance, analyses of the capabilities and arguments over whether the threat of North Korea's military is warranted have been divided. Even worse, significant portion of the writing on it have been inaccurate and misleading.<sup>6</sup>

Imbalanced approaches have been responsible for the wide divisions of the assessments on North Korea's military capabilities and objectives. They have failed to look at the essential aspects to measure a state's defence planning, which involves the examination of a diverse number of factors. Some have looked exclusively at the micro aspects of North Korea's economy, politics and society, disregarding the important universal aspects in defence planning. Meanwhile, others have focused too much on politics and strategic studies concepts and have been ignorant to the understanding of the nature of North Korea itself.

Another major pitfall in analyses of North Korea's military is the misinterpretation of the *Seon-gun Jeonchi*, or (military first politics). However, *Seon-gun Jeonchi* is more about ideology and motivating the mobilisation of the population for the "struggle", a term often used by communist/socialist regimes. Even in terms of the military, *Seon-gun Jeonchi* claims that ideology and philosophy is more powerful than weapons, and criticises past commanders who relied on "bean counting".<sup>7</sup> Although this slogan may be used to justify the supremacy of the military sector to the civilian one, there is little evidence that suggest its connection to the actual

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<sup>5</sup> Betts, Richard K. 1995. Op cit. Pg.251

<sup>6</sup> Merrill, John. 1997. "Reading and Misreading North Korea." In Security Environment in the 21th Century and Korea's Strategic Options, ed. Yong-Soon Yim, et al. Seoul: Research Institute for International Affairs. Pg. 45.

<sup>7</sup> 전덕성, *선군정치에 대한 리해* 2004년 평양출판사. Pg. 66-67

capability of North Korea's military.

Analysts such as Bermudez have tried to examine the strength of the North Korean military by giving a commentary of the individual units, institutions and their tactics.<sup>8</sup> While commentaries such as these do give insight into the micro aspects of the North Korean military, at times they often overlook the background causes to a state's strategic decisions to acquire these units. Determining a threat posed by a state by simulating their contingencies reflects little of the decisions that lead them to execute operations of any kind. Furthermore, attempts to uncover the micro aspects or tactics of a state's military are questionable as they often rely on assumptions and somewhat trivial sources.

Some have also labelled North Korea as a threat on the basis of their militarist state. However, while militarist totalitarianism is a measure of a state's commitment to the military,<sup>9</sup> it is insufficient to conclude that it is dangerous and powerful. Furthermore, analysts like Takesada have contended that North Korea's ultimate strategic objective remains to be revolutionising the whole Korean peninsula.<sup>10</sup>

There are also those that demonise North Korea because of its "rogue" character, diplomatic style abduction of foreign civilians, and its possession of nuclear arsenals. Such skewed analyses are made largely from political correctness, but also because they simply overlook the actual mechanism of Pyongyang's grand strategy schema and true dynamics of North Korea's military institution.

Another group, dismisses the threat of North Korea's military threat, arguing that the failing economy is a major constraint to their capabilities and that the purpose of the military is solely for political purposes (i.e. regime survival) and/or as a source of gaining cash through exporting weapons. While such argument is not completely wrong, it seems to assume that the armed forces have forfeited its traditional military role.

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<sup>8</sup> Bermudez Jr, Joseph S., *North Korean special forces*. 2nd ed ed. Naval Institute special warfare series. 1998, Annapolis, MD: Naval Institute Press. and, Bermudez Jr, Joseph S. 2001. *Shield of the great leader : the armed forces of North Korea*. St Leonards, N.S.W.: Allen & Unwin.

<sup>9</sup> Payne argues that force ratio is useful as it simply "measures the manpower sacrifice made by the nation", and it "is also a dependable indirect measure of the true defence burden (i.e. resources needed to equip the personnel and vice versa)" Payne, James L. 1989. *Why nations arm*. Oxford, UK ; New York, NY, USA: B. Blackwell. Pg 25.

<sup>10</sup> Takesada, Hideshi, "Chosen hanto de okiteirukoto", *Shinkokusaku*, 1<sup>st</sup> November 2005, Pg..7~9.

Perhaps the most convincing analysis of North Korea's military capability and armament are those works that focus on the economics and interpretations of available statistical data.<sup>11</sup> These scholars have challenged the topic with a more scientific method, and the assessments have proved to be fairly consistent with Pyongyang's patterns of behaviour. However, the weaknesses are that coverage of other important aspects such as strategic culture and actual circumstances within North Korea is somewhat lacking.

The conclusions made by these schools of thought are not wrong. Indeed, they do analyse the issue using some valid methodologies and conclusions. However, there are also many weaknesses to their arguments. Firstly, these assessments need to emphasise that although immediate objectives change to address the environment, the chief objectives remains consistent and are often set as long-term goals. Secondly, many of these papers seem to debate only about the role of the North Korean military or what its armed forces looks like, ignoring the strategy and policies. Thirdly, many of these papers seem to overlook the sophisticated nature of the strategic policy making schema, which involves determining the various factors that compose not only the military capability of the state, but also the grand strategy itself. Fourthly, some assessments treat the armed forces as if it has moved away from its traditional military role. Finally, analysis of whether the capability can be efficiently and effectively exploited is seldom found.

### **Constants and variables in North Korea**

So are the approaches and concepts mentioned thus far applicable and plausible when studying North Korea's military capability? While the assessments using this method may be limited, it could, give a better estimate. Indeed this may sound pointless, but it is important to understand the gross complexity of assessing the military power of any state. Knorr correctly argues that military power is the sum of the willingness to fight, administrative capacity and economic capacity.<sup>12</sup> However, if this is applied to North Korea, it will only give a vague picture.<sup>13</sup> Assessing capability or power alone also leaves much unanswered, simply because it is only when it engages in actual combat can the magnitude of the force be revealed.

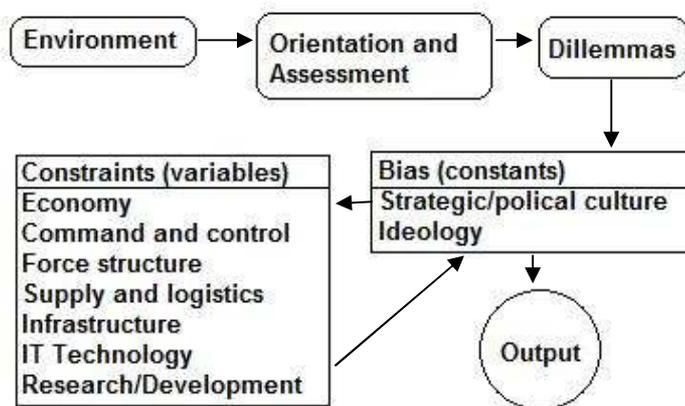
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<sup>11</sup> See both: 성채기. 2006. "북한 군사력의 경제적 기초: "군사경제"실체에 대한 역사적/실증적 분석." and, 함택영. 2006. "북한의 군사력 및 남북한 군사력균형." In 북한군사문제의 재조명, ed. 함택영: 한울아카데미.,

<sup>12</sup> Knorr, Klaus. 1956. *The war potential of nations*. Princeton, New Jersey: Princeton University Press. Pg. 3

<sup>13</sup> For example, assuming that North Korea's indoctrination of its ideology and propaganda is effective, its willingness to fight may be credible. However, the failing economy and inflexible command and control system makes it quite obvious that it is undermining their state power.

This chapter introduces the factors that influence the effectiveness and efficiency of North Korea's military capability. It is divided into two parts; biasing factors, and constraints. This chapter will treat the bias factors (i.e. strategic culture and ideology) as traditional constants and constraints will be treated as variables as categorised by Richardson.<sup>14</sup> Analysing North Korea's military capability in the context of effectiveness and efficiency will reveal the things that it "can't" or "won't" do. Logically, all states will aim to achieve their strategic goals in the most efficient and effective manner. Failing to do so will not only increase the costs but also vulnerability to risks and even failures.



North Korea's strategic/military policy making schema?

### **Bias**

#### **Strategic culture and ideology**

Political bias within the policy making schema is one area which needs attention, especially in a socialist state where the military plays a central role.<sup>15</sup> Such would indicate that decisions made by the government will give preference to favour the military or stand by its militarist ends, often negatively influencing the means and ends. For example, the *Sa-dae gunsa roson* (Four-Point Military Guidelines)<sup>16</sup> seems to be a "spin-off" doctrine of the *Seon-gun jeong-chi*, but it has seldom kept pace with reality.

Ideology alone does not function as the sole politically biasing element. What is equally

<sup>14</sup> Richardson, Lewis Fry, Nicolas Rashevsky and Ernesto Trucco. 1978. *Arms and insecurity : a mathematical study of the causes and origins of war*. Ann Arbor, Mich: reprinted for Boxwood Press by University Microfilms International. Pg.12

<sup>15</sup> For North Korea's emphasis on importance of the military, see: 전덕성. 2004 년 선군정치에 대한 리해 평양출판사.

<sup>16</sup> "북한의 군사정책." In *북한학*, ed. 육군사관학교: 황금알. 2006. Pg. 204~246.

influential is the state's strategic culture,<sup>17</sup> which functions when a state opts for a strategic choice derived from their own political culture distinctive from the choices made by other states, even when it is in regards to the same facts.<sup>18</sup> For example, North Korea's "fear" of both domestic and external threats to the regime is one of the strategic cultures. Here, the strategic environment, past experiences and sense of insecurity has compelled Pyongyang to take a defensive-but-timid oriented behaviour to ensure regime survival. Hence, their defensive nature can be justified by their efforts to appease its regime insecurity both at domestic and grand strategic level.

### ***Constraints***

#### **Economy**

The economy is perhaps the most pivotal factor to a state's military capability. How a state plans its defence budget is undoubtedly a crucial aspect in strategic planning, and there needs to be more papers that analyses the economic aspects of the North Korean military institution and the nature of its defence expenditures. Huisken summaries military expenditure as resources devoted to the following: Pay and allowances of military personal, pay of civilian personnel, operations and maintenance, procurement, research and development and construction, pensions to retired military personnel, military aid, civil defence, para-military forces, and also military aspects of activities that are acknowledged as having a joint civil/military function (e.g. space or atomic energy).<sup>19</sup> Knorr contends in his work that, "In peace or war, the economic strength of nations, i.e. their capacity to produce, depends on the magnitude, composition, and quality of their economic resources."<sup>20</sup> In such case, this would indicate that North Korea is economic power is severely constrained and it has limited capacity to make capital procurements or even paying the bills to sustain its forces to boost its military strength. The counterargument is that North Korea is in fact devoting a significant amount of its economy to the military. However, it is important to note that the actual size of the budget is actually quite small when compared to other states, hence the capacity of its purchasing power is questionable.

In North Korea, the second economic committee is in charge of producing all equipment,

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<sup>17</sup> Johnston, A.I., *Thinking about Strategic Culture*. International Security, 1995. **19**(4): Pg. 32-64.

<sup>18</sup> Ramesh Thakur, 'New Zealand: the Security and Tyranny of Isolation', in Trood (ed) *Strategic Cultures in the Asia Pacific Region*, pp. 314.

<sup>19</sup> Huisken, R. and Stockholm International Peace Research Institute, *The meaning and measurement of military expenditure*. SIPRI research report ; no. 10. 1973, Stockholm: SIPRI. Pg. 7

<sup>20</sup> Knorr, 1956. Pg.163.

material, and platforms for the military,<sup>21</sup> and despite the failing economy, North Korea's military industry remains to be the most influential, and only sector of the economy that has shown positive growth.<sup>22</sup> Kim Il-sung argued that the strength of the military heavily depends on the development of the domestic heavy industry,<sup>23</sup> and it seems that for North Korea, the heavy industry is almost the lifeline of its national security.<sup>24</sup> This indicates the government's complete control of the procurements and production of military platforms and equipment. However, it also may imply that fails to make logical acquisitions of platforms and equipment needed to effectively carry out set tasks.

The relationship between the defence and civil economics of North Korea is zero-sum, and as Eberstadt argues, "North Korea's prolonged and far-reaching military mobilisation fundamentally affects its overall economic structure and its patterns of economic performance."<sup>25</sup> Thus, North Korea is facing a dilemma of how it can address its failing domestic economy while maintaining the military that is sufficiently capable enough to deter threats from abroad. Until the collapse of the Soviet Union, North Korea could afford to turn a blind eye to the economic difficulties and continue to devote its capital to the defence industry. However today, the situation is hitting a critical level, decreasing their purchasing power, and consequently limiting them from investment in new military platforms from China or Russia.

The poor state of the economy has also compelled Pyongyang to compromise their preferences in their "technology mix" dilemma. Eberstadt correctly argues, "North Korea's 'military burden' is determined not only by government priorities, but by the specifics of the contest into which it has entered. In all likelihood, North Korea's defence industries have been locked into a competition on highly disadvantageous terms. Confronting the US-ROK alliance in a high-tech (and rapidly innovating) military adversary, North Korean defence industries presumably have embarked upon projects where their rates of return upon capital expenditures were extremely low...attempts at military modernization may be especially costly in an economy where technological innovation lags and international avenues of technology transfer are marginal."<sup>26</sup> This argument fits perfectly with the current situation, where Pyongyang is financially incapable of invest in qualitative modernization of the armed forces to compete with the other countries in

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<sup>21</sup> 정현수. 1995. 북한정치경제론: 신영사. Pg. 245

<sup>22</sup> Bermudez Jr, J.S., *Shield of the great leader : the armed forces of North Korea*. Armed forces of Asia. 2001, St Leonards, N.S.W.: Allen & Unwin. Pg.45

<sup>23</sup> 김일성저작집, 19 권, 294 면, [백좌전서] 4 권, 695, 696 면) cited in: 정현수. 1995. Pg.236

<sup>24</sup> 정현수. 1995.. Pg. 236

<sup>25</sup> Nicholas Eberstadt – Development, structure and Performance of the DPRK economy: empirical hints 38,39

<sup>26</sup> Ibid. Pp 42

the region who are modernizing their military through information-based RMA. Moreover, even if revenue is gained, this has to be directed to maintenance and training costs which will still fail to significantly increase the preparedness capabilities in the mid-short term. Therefore, it can be argued that the development of nuclear and chemical/biological weapons was the only option where it could get relatively good returns while increasing its military leverage.

In a nutshell, this seems to indicate that North Korea will require extraordinary amount of capital to revive both its military and civilian economy before it can have a conventional force sufficient to fight a war. Indeed, Pyongyang has (within limits) been proactive in domestic economic reform and is welcoming foreign investment in recent years, analysts like Lankov are sceptical about how this will improve the economy.<sup>27</sup> How does this effect North Korea's military capability? If North Korea aims to compete against its adversary "head to head", perhaps it does seem unlikely that the situation will change. Minnich answers this by claiming that due to fiscal constraints, Pyongyang has decided to increase its capabilities through a cheaper alternative, by acquiring asymmetric weapons such as weapons of mass destruction (nuclear), chemical/biological weapons and missiles.<sup>28</sup> While this is true, it is a band-aid treatment to its weaknesses and fails to address its military objectives.

### **Command control**

The command and control system within the military is crucial in the context of effectively and efficiently executing tasks.<sup>29</sup> North Korea is notorious for its highly centralised command and control system, and is proving to be one of its critical weaknesses.<sup>30</sup> For example, such rigidity is a major obstacle when in time of emergency as it is likely that the information processing time will be outpaced by the adversary – hence unable to exploit its capability in a timely manner. Given the nature of North Korea's political interests (i.e. regime survival), the command control structure is unlikely to make any significant changes. However, how it will adjust in the next succession of power is open-ended.<sup>31</sup>

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<sup>27</sup> Lankov, A., *Staying alive: why North Korea will not change.(Comments)*. Foreign Affairs, 2008. 87(2): p. 9(8).

<sup>28</sup> Minnich, James M. 2005. *The North Korean People's Army : origins and current tactics*. Annapolis, Md.: Naval Institute Press. Pg.71

<sup>29</sup> See Snyder, F.M. and National Defense University. *Institute for National Strategic Studies, Command and control : the literature and commentaries*. 1993, Washington, DC: National Defense University.

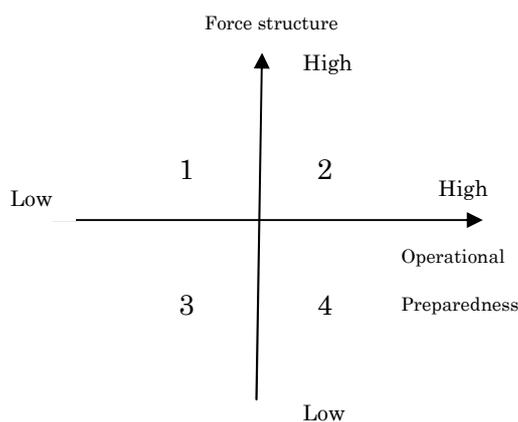
<sup>30</sup> Atkeson, E.B. and Institute of Land Warfare (Association of the United States Army), *The North Korean military threat in perspective*. Land warfare papers ; no. 21. 1995, Arlington, Va: The Institute of Land Warfare, Association of the United States Army. Pg 4.

<sup>31</sup> If major adjustments were made during the first succession process (Kim Il-sung to Kim Jong-il), more radical changes are anticipated in the next one (unless of course, the whole regime implodes).

### Quality of conventional forces?

One area that comes under intense debate is the quality of the conventional platforms in the North Korean military. Many are in fact critical of the conventional forces, arguing that the platforms they have are too old for combat. Atkeson claimed that since the end of the Cold War, North Korea has started to lose its conventional military edge over the South.<sup>32</sup> Although it is not wrong, analysts must be careful with how such conclusion is drawn. While it is true that the conventional forces have failed to reconfigure itself to compete with the on-going modernisation process in the region (U.S., Japan, South Korea and China), this should not lead to the conclusion that it is incapable of fighting. Conventional forces will always be pivotal to any military campaign as it is the one that completes the campaign and captures the target. Furthermore, on numerous occasions, militaries with rather “primitive” weapons have proved to be equally damaging. Given the positioning of the North Korean forces, they are able to “pack a punch or two”. The problem is, how long can they continue given the lack of resources to sustain a force in combat.

Another weakness is the unlikelihood of modernisation. As mentioned earlier, the state of the economy is a major constraint to developing or procuring of modern platforms. Furthermore, even if this is achieved, the time needed to train personnel to this equipment, reconfiguration of tactics, and supplying the maintenance resources is likely to lead to further complexity and delay.



When put on a graph, the force structure preparedness illustrates a clearer picture of North Korea’s military capability.

Square 1 – Sufficient force structure with poor maintenance (North Korea in 1980s~early 1990s)

<sup>32</sup> Atkeson, E.B. and Institute of Land Warfare, 1995. Pg.15

Square 2 – Capacity to be more assertive (as seen in the early 1960s), posing as a credible threat.

Square 3 – More emphasis on regime survival, defence capability with minimal cost and resources, (present).

Square 4 – Weak force structure with high operational preparedness.

Hence, square 2 and 4 would provide a limited capability of countering the South, U.S. or Japan.

Furthermore, even if the economic situation improves, in order for North Korea to become a fully prepared status, it would be difficult for them to execute a balanced improvement to their military capability (hence falling into either square 1 or 4).

### **Education, training and morale**

Experiences and witness accounts by defectors have provided some idea of what military life in North Korea is like.<sup>33</sup> Emphasis on ideology indicates that the military seems to be an incubator for soldiers loyal to the regime. Hodge also argues, “North Korea has had decades to develop a campaign plan with a small number of military objectives that is probably extensively scripted and war-gamed and would require limited flexibility and modification.”<sup>34</sup> The gruelling training regime that the soldiers experience does not indicate by any means the strength or capability of the armed forces itself. There is also the argument that the personnel are well trained in terms of ideology.<sup>35</sup> However, loyalty does not necessarily mean that they are efficient and effective.<sup>36</sup> Rather, analysts need to make assessments that address the following; co-ordination between personnel and units, timely performance, and sufficient training to man equipment/platforms.<sup>37</sup>

### **Infrastructure**

The poor state of infrastructure in North Korea is definitely one of the pivotal factors to their military capability. Efficiency of military operations and readiness heavily depends on the quality of infrastructures such as; roads, airfields, ports, rails, water and energy supplies. Additionally, these could also have influence morale amongst the personnel.

### **IT Technology**

Another area that needs attention is North Korea’s development of its IT industry,<sup>38</sup> and its

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<sup>33</sup> See: 이정연, *북한군에는 건빵이 없다*. 2007: 플래닛미디어.

<sup>34</sup> Hodge, Homer T. 2003. "North Korea's military strategy." *Parameters* 33(1):68(14). Pg.78

<sup>35</sup> Minnich, 2005. Pg.71

<sup>36</sup> Perhaps with the exception of spies dispatched in South Korea and Japan.

<sup>37</sup> See: Betts 1995, Hinge 2000

<sup>38</sup> Command control: Database of information of enemy, geography and weather, surveillance etc. Various universities in North Korea are training elites in IT, hacking, communication for

application to the military. In the information age, technology in IT and communication is crucial to the military in terms of electronic warfare, increasing efficiency in command and control, reconnaissance and surveillance. North Korea pursued development in the IT industry with military-oriented motive, after it recognized the importance of electronic warfare since the mid-1990s.<sup>39</sup> However, despite commitments to improve in the field of IT, it is still far behind other states.<sup>40</sup> This has been mainly due to its isolationist nature and failure to absorb new technologies and perhaps also because it simply has not been well adapted to their strategies. However, should North Korea manage to overcome these challenges, it could indicate opportunities for it to upgrade its control command systems, and in the longer term, electronic warfare capabilities.

### **Conclusion**

Thus far the paper has looked for alternative methodologies in assessing North Korea's military capability. The study argued that more focus is needed on the relationship between various factors that are part of North Korea's defence planning to its effectiveness and efficiency. It contends that the study through this approach will reveal the limitations to North Korea's military capability, and this perhaps provides a more conservative but less inaccurate assessment.

Methods of assessing effectiveness and efficiency could start by grasping recent changes in the military, or even how the military utilises its resources. Deeper understanding of this can be achieved when the constraints (i.e. variables) are studied. These variables, as discussed in the paper, include, but not limited to: economy, structure of command and control, dynamics of forces, infrastructure, IT technology, training and morale, research and development. These factors limit improvements in effectiveness and disallow the means to meet the ends. Furthermore, the nature of the North Korean regime has resulted in the birth extraordinarily complicated systems (in other words, the "variables" mentioned throughout this paper"). Combined with the biases, these create complexities in the process which results in extra costs, coming at the expense of effectiveness and efficiency.

It was also argued that another crucial aspect is to establish a good understanding of the current social, political and strategic circumstances in North Korea. Needless to say, the key is to "read and understand" North Korea's diplomatic, environmental, ideological, political and societal

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Command and Control, electronic warfare. 남성욱, *북한의 IT 산업 발전전략과 강성대국 건설*. 2002: 한울아카데미. Pg 168-170

<sup>39</sup>남성욱, *북한의 IT 산업 발전전략과 강성대국 건설*. 2002: 한울아카데미. pg 167

<sup>40</sup> Pursuing hacking, but achieved little (once attempted to hack a house in the US) 170

culture, in order to correctly assess the biases in the defence planning process. This provides an insight on the compelling limitations suffered by the regime and how the current situation grossly contradicts its military capabilities and objectives. Such constraints serve as a good hint when speculating the likely decisions that the North Korean regime will make when addressing the strategic dilemmas to in its defence planning.

There are of course, challenges using this approach. Firstly, while this study so far has used minimal data, lack of statistics does more or less limit achieving complete assessments. For now, statistics from North Korea may be wishful thinking. However, a solution to this could be finding methodologies that provide satisfactory quantitative data. Secondly, further assessments of North Korea's grand strategy are needed in order to take this method of assessment to the next level. Thirdly, there needs to be further research into whether other forms of biasing and constraining factors exist. Furthermore, studies on whether these constants and variables are of equal or different value need to be assessed. Finally, there is also the lack of accurate assessments of what North Korea's strategic policy making schema actually looks like. Better understanding of the strategic/military policy making process will render a clearer picture of the causative effects of the constants and variables to North Korea's military capability.