



**NAVAL  
POSTGRADUATE  
SCHOOL**

**MONTEREY, CALIFORNIA**

**THESIS**

**FEASIBILITY OF IMPLEMENTING AN ALL-VOLUNTEER  
FORCE FOR THE ROK ARMED FORCES**

by

Jung Woo Yim

March 2007

Thesis Advisor:

Mark J. Eitelberg

Second Reader:

Kwan Ho Cho

**Approved for public release; distribution is unlimited**

THIS PAGE INTENTIONALLY LEFT BLANK

<b>REPORT DOCUMENTATION PAGE</b>			<i>Form Approved OMB No. 0704-0188</i>
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instruction, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington DC 20503.			
<b>1. AGENCY USE ONLY (Leave blank)</b>	<b>2. REPORT DATE</b> March 2007	<b>3. REPORT TYPE AND DATES COVERED</b> Master's Thesis	
<b>4. TITLE AND SUBTITLE:</b> Feasibility of Implementing an All-Volunteer Force for the ROK Armed Forces		<b>5. FUNDING NUMBERS</b>	
<b>6. AUTHOR(S):</b> Jung Woo Yim		<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>	
<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> Naval Postgraduate School Monterey, CA 93943-5000		<b>10. SPONSORING/MONITORING AGENCY REPORT NUMBER</b>	
<b>9. SPONSORING /MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> N/A		<b>11. SUPPLEMENTARY NOTES</b> The views expressed in this thesis are those of the author and do not reflect the official policy or position of the Department of Defense or the U.S. Government.	
<b>12a. DISTRIBUTION / AVAILABILITY STATEMENT</b> Approved for public release; distribution is unlimited		<b>12b. DISTRIBUTION CODE</b>	
<b>13. ABSTRACT (maximum 200 words)</b>  This research evaluates the feasibility of introducing all-volunteer military recruitment in the Republic of Korea (ROK). The ROK plans to reduce military manpower strength from 681,000 to 500,000 by 2020. The ROK's plan to downsize military manpower could raise popular expectations for a radical change in the military personnel system, such eliminating the draft and moving toward an all-volunteer force. Issues of military misconduct, conscientious objection, draft evasion, and an unequal distribution of military service across the sexes were not fully resolved under the draft. In terms of opportunity cost, the draft imposes an economic burden on young people. Further, the present draft may not be suitable for a high-technology military that no longer needs massive numbers of personnel. This study analyzes the type of military service system Korea maintains at present, using key defining indicators, and evaluates the suitability of Korea's current military/economic/political/social factors for voluntary recruitment through an open-systems conceptual model. Results indicate that the draft should be maintained for the near future, but this does not preclude changes in the current system. In the long run, a gradual transition to voluntary recruitment appears necessary to develop a quality-focused approach to military resources that is in line with national defense reforms and the changing aspects of warfare. The ROK should consider a phase-to-phase transition toward volunteer-driven recruitment, as it eventually brings an end to the draft.			
<b>14. SUBJECT TERMS:</b> Military, ROK Manpower, Draft, Conscripton, All-Volunteer Force			<b>15. NUMBER OF PAGES</b> 89
			<b>16. PRICE CODE</b>
<b>17. SECURITY CLASSIFICATION OF REPORT</b> Unclassified	<b>18. SECURITY CLASSIFICATION OF THIS PAGE</b> Unclassified	<b>19. SECURITY CLASSIFICATION OF ABSTRACT</b> Unclassified	<b>20. LIMITATION OF ABSTRACT</b> UL

THIS PAGE INTENTIONALLY LEFT BLANK

**Approved for public release; distribution is unlimited**

**FEASIBILITY OF IMPLEMENTING AN ALL-VOLUNTEER FORCE FOR THE  
ROK ARMED FORCES**

Jung Woo Yim  
Captain, Republic of Korea Army  
B.A., Korea Military Academy, 2001

Submitted in partial fulfillment of the  
requirements for the degree of

**MASTER OF SCIENCE IN MANAGEMENT**

from the

**NAVAL POSTGRADUATE SCHOOL  
March 2007**

Author: Jung Woo Yim

Approved by: Mark J. Eitelberg  
Thesis Advisor

Kwan Ho Cho  
Second Reader

Robert N. Beck  
Dean, Graduate School of Business and Public Policy

THIS PAGE INTENTIONALLY LEFT BLANK

## **ABSTRACT**

This research evaluates the feasibility of introducing all-volunteer military recruitment in the Republic of Korea (ROK). The ROK plans to reduce military manpower strength from 681,000 to 500,000 by 2020. The ROK's plan to downsize military manpower could raise popular expectations for a radical change in the military personnel system, such as eliminating the draft and moving toward an all-volunteer force. Issues of military misconduct, conscientious objection, draft evasion, and an unequal distribution of military service across the sexes were not fully resolved under the draft. In terms of opportunity cost, the draft imposes an economic burden on young people. Further, the present draft may not be suitable for a high-technology military that no longer needs massive numbers of personnel. This study analyzes the type of military service system Korea maintains at present, using key defining indicators, and evaluates the suitability of Korea's current military/economic/political/social factors for voluntary recruitment through an open-systems conceptual model. Results indicate that the draft should be maintained for the near future, but this does not preclude changes in the current system. In the long run, a gradual transition to voluntary recruitment appears necessary to develop a quality-focused approach to military resources that is in line with national defense reforms and the changing aspects of warfare. The ROK should consider a phase-to-phase transition toward volunteer-driven recruitment, as it eventually brings an end to the draft.

THIS PAGE INTENTIONALLY LEFT BLANK

# TABLE OF CONTENTS

<b>I.</b>	<b>INTRODUCTION.....</b>	<b>1</b>
<b>A.</b>	<b>BACKGROUND .....</b>	<b>1</b>
<b>B.</b>	<b>MANPOWER PROBLEMS .....</b>	<b>2</b>
<b>C.</b>	<b>THE ROK DEFENSE REFORM PLAN 2020 .....</b>	<b>4</b>
<b>D.</b>	<b>OVERVIEW OF CHAPTERS.....</b>	<b>6</b>
<b>II.</b>	<b>LITERATURE REVIEW .....</b>	<b>7</b>
<b>A.</b>	<b>A CONCEPTUAL MODEL FOR DEFENSE ORGANIZATION .....</b>	<b>7</b>
	<b>1. An Open Systems Model .....</b>	<b>7</b>
	<b>2. A Conceptual Model for Defense Organization .....</b>	<b>8</b>
<b>B.</b>	<b>ECONOMIC ANALYSIS OF MILITARY SERVICE SYSTEMS .....</b>	<b>10</b>
	<b>1. Economic Cost.....</b>	<b>10</b>
	<b>2. Budget Cost.....</b>	<b>11</b>
	<b>3. Conscription Tax.....</b>	<b>12</b>
	<b>4. Labor Utilization.....</b>	<b>15</b>
	<b>5. Labor Turnover .....</b>	<b>16</b>
<b>III.</b>	<b>BACKGROUND OF MILITARY SERVICE SYSTEM .....</b>	<b>19</b>
<b>A.</b>	<b>UNDERSTANDING MILITARY SERVICE.....</b>	<b>19</b>
	<b>1. Concepts of Military Service.....</b>	<b>19</b>
	<b>2. Types of Military Service Systems.....</b>	<b>20</b>
	<i>a. Compulsory Systems .....</i>	<i>20</i>
	<i>b. Voluntary Systems.....</i>	<i>21</i>
	<b>3. Determining Factors .....</b>	<b>23</b>
<b>B.</b>	<b>MILITARY SERVICE SYSTEMS OF MAJOR COUNTRIES .....</b>	<b>23</b>
	<b>1. France.....</b>	<b>23</b>
	<b>2. Germany .....</b>	<b>24</b>
	<b>3. Italy.....</b>	<b>24</b>
	<b>4. Israel.....</b>	<b>25</b>
	<b>5. Taiwan.....</b>	<b>25</b>
	<b>6. China .....</b>	<b>25</b>
	<b>7. Russia .....</b>	<b>26</b>
	<b>8. Japan .....</b>	<b>26</b>
	<b>9. United States.....</b>	<b>27</b>
<b>C.</b>	<b>CHARACTERIZING CHANGES IN MILITARY SERVICE SYSTEMS.....</b>	<b>27</b>
<b>IV.</b>	<b>ANALYSIS OF MILITARY DESIGN FACTORS .....</b>	<b>29</b>
<b>A.</b>	<b>INDICATORS OF MILITARY DESIGN FACTORS .....</b>	<b>29</b>
	<b>1. Overall Conscript Ratio (CR).....</b>	<b>30</b>
	<i>a. Type 0 (All-Volunteer Force) .....</i>	<i>31</i>
	<i>b. Type I (Pseudo Conscript Force).....</i>	<i>31</i>
	<i>c. Type II (Softcore Conscript Force) .....</i>	<i>31</i>
	<i>d. Type III (Hardcore Conscript Force).....</i>	<i>32</i>

2.	Military Participation Ratio of the Military Age Cohorts (MPRMAC) .....	32
3.	Officers/NCOs/Enlisted Personnel Ratio .....	32
4.	Conscript Ratio in the Air Force (CRAF) and the Navy (CRN) ...	33
5.	Length of Service (LOS) .....	33
B.	ANALYSIS OF INDICATORS FOR THE ROK MILITARY .....	33
V.	ANALYSIS OF THE ROK MILITARY MANPOWER FORCE	
	STRUCTURE FACTORS.....	37
A.	MILITARY FACTORS.....	38
1.	Military Threats .....	38
2.	The Military Transformation (DRP 2020) .....	40
3.	The Trends of a War in the Information-Driven Era and the Revolution in Military Affairs (RMA) .....	41
4.	The Cooperative Self-Reliant Defense .....	43
5.	Technological Capability .....	45
B.	ECONOMIC FACTORS.....	46
1.	The Effect of Economic Situation of South Korea .....	46
2.	Defense Budget Structure.....	48
C.	POLITICAL FACTORS .....	51
1.	Security Situation in Northeast Asia .....	51
2.	Future Development of the ROK-U.S. Military Alliance.....	53
D.	SOCIAL FACTORS .....	54
1.	Highlights of the Population Structure .....	54
2.	Social Perspective toward Military Service.....	57
E.	ANALYSIS OF ROK MILITARY MANPOWER FORCE	
	STRUCTURE FACTORS.....	58
1.	Military Factors .....	59
2.	Economic Factors.....	59
3.	Political Factors.....	60
4.	Social Factors .....	60
VI.	CONCLUSION .....	61
A.	OVERVIEW FOR SERVICE SYSTEM AND SUGGESTIONS.....	61
1.	Decision for Service System .....	61
2.	Basis of the Military System under the Draft System .....	64
a.	<i>Adjusting the Size of the Armed Forces</i> .....	64
b.	<i>Composition by Rank</i> .....	64
c.	<i>Composition by Service Terms</i> .....	65
d.	<i>Composition by Divisions/Skills</i> .....	65
e.	<i>Effective Use of the Female Population</i> .....	65
B.	CONCLUSION .....	66
	LIST OF REFERENCES.....	69
	INITIAL DISTRIBUTION LIST .....	73

## LIST OF FIGURES

Figure 1.	Open Systems Theory: Organizations are Purposive Systems .....	7
Figure 2.	An Open Systems Model .....	8
Figure 3.	A Conceptual Model of the Defense Organization.....	9
Figure 4.	Measuring the Economic Cost of Military Manpower .....	10
Figure 5.	Economic and Budget Cost of Military Manpower .....	11
Figure 6.	Measuring the Conscription Tax.....	13
Figure 7.	Impact on Civilian Income Streams of the Conscription Tax.....	14
Figure 8.	Overemployment of Labor with the Draft .....	16
Figure 9.	Productivity by the Length of Service .....	17
Figure 10.	Types of Military Service Systems .....	20
Figure 11.	Military Design Factors .....	29
Figure 12.	A Typology Force Structure and Expected Changes .....	31
Figure 13.	Military/Economic/Political/Social Circumstances and Their Relationship with Military Design Factors .....	37
Figure 14.	Concept of Cooperative Self-Reliant Defense .....	44
Figure 15.	Defense in Government Budgets and GDP .....	49
Figure 16.	Population of the Service-Age Male and the Changing Population Structure.....	56
Figure 17.	Military/Economic/Political/Social Circumstances Used in Determining the Military Service System.....	59
Figure 18.	A Conceptual Model of the Defense Organization.....	61
Figure 19.	A Typology of Force Structure and Expected Changes.....	62

THIS PAGE INTENTIONALLY LEFT BLANK

## LIST OF TABLES

Table 1.	Manpower Strength Reductions in Defense Reform Plan 2020, by Service .....	5
Table 2.	Analysis of Military Service Systems .....	22
Table 3.	Military Design Indicators .....	30
Table 4.	Military Design Indicators for the ROK Armed Forces .....	34
Table 5.	The Trends of a War in the Information-Driven Era .....	42
Table 6.	The Potential for Military Reform in South Korea’s Neighboring Countries .....	43
Table 7.	The ROK Nominal Defense Budget, FY 2004 – FY 2005 .....	48
Table 8.	Trends in the Total Population and Population Growth Rate .....	55
Table 9.	National Perception of Military Service .....	57

THIS PAGE INTENTIONALLY LEFT BLANK

## ACKNOWLEDGMENTS

“Be joyful; pray continually; give thanks in all circumstances, for this is God’s will for you in Christ Jesus”

1 Thessalonians 5: 16~18

First of all, I would like to thank the ROK Army for giving me the chance to study at NPS as well as my thesis advisor, Professor Mark J. Eitelberg, and second reader, Dr. Kwan Ho Cho, whose patience, dedication and guidance made this thesis possible.

I would also like to thank my family for their support during my entire life. Without their support, this would never have been possible.

My fellow students and professors at NPS.... I will not be able to forget their help and kindness.

All the Korean officers at NPS and In Kyu’s family.... They have enriched my life in Monterey in so many ways.

Specially, I would like to thank Sharon for her wonderful help. As my best friend and my English teacher, she made my life at NPS in Monterey very memorable and successful.

THIS PAGE INTENTIONALLY LEFT BLANK

## **I. INTRODUCTION**

### **A. BACKGROUND**

The army of the Republic of Korea (ROK) is promoting long- and mid-term plans that include a shift from a scale-focused army to an information/knowledge-driven and technology-focused corps of elite troops that can actively cope with the changes of war in modern times. Such visions are well described in Defense Reform Plan (DRP) 2020.

DRP 2020 was designed to modernize equipment and improve the qualitative characteristics of the military while reducing the quantity of manpower and weapons systems. The ROK plans to reduce military manpower strength from 681,000 to 500,000 by 2020. To make up for the manpower reduction, military capabilities will be increased. This is a natural evolution, given changes in the nature of the North Korean military threat as well as economic growth, technological advancements, and socio-political developments in the ROK. In light of a radically decreasing population in the male-youth cohort, due to a low fertility rate, a reduction of military manpower is inevitable.

The ROK's plan to downsize military manpower could raise popular expectations for a radical change in the military personnel system, such as the possibility of doing away with the draft and moving toward an all-volunteer force (AVF). This highly political issue had been raised in meetings objecting to the draft and by some anti-war non-governmental organizations (NGOs). According to these groups, the draft is not suitable for a high-technology military that no longer needs massive numbers of personnel.

Furthermore, issues of military misconduct, conscientious objection, draft evasion, and an unequal distribution of military service across the sexes were not fully resolved under the draft. In terms of opportunity cost, the draft raised the economic burden of the people. As militaries across the world downsized their forces, some felt that the need for a relatively large force had passed. Nevertheless, strong support remained for the draft, since there were no plans to downsize the ROK military. But if the Ministry of National Defense (MND) reduces the quantity of military manpower under the DRP, this political

issue could come under the spotlight again. Doubts about retaining the draft would likely resurface and calls for an AVF would occur once more. In particular, a radical political party would most certainly raise the possibility of switching to an AVF.

At the same time, a number of factors argue against ending the draft entirely. Though the military pursues an army equipped with cutting-edge technology, the funds necessary to fully complete modernization cannot be raised in a short term. So, gradual changes should be introduced. That is, while admitting the limitations of reality, the MND should endeavor to bring changes to the current military service system in phases rather than immediately. Also, in view of the current values and customs of military service in South Korea, introducing a voluntary system could cause the army to lose its social representation as “the army of the people.” Further, some questions remain as to whether Korea can afford a voluntary system based on its economic power. Also, the continuing confrontation with the North makes it difficult to be optimistic about national security.

To sum up, a sharp divide exists between those who support a voluntary system due to the ill effects of the current system and those who favor conscription because of economic realities. In view of the global changes made to armies and the changing conditions of war, we can expect continuing discussion and debate. Thus, we should determine which type of military service is best suited for the country, given our present understanding of its defense needs.

## **B. MANPOWER PROBLEMS**

The ROK’s armed forces have a few problems to be solved or improved in terms of operating manpower. First, the ROK’s military service system is based on the low cost of manpower, which means a large, labor-intensive army. This structure relies on a large quantity of minimally skilled soldiers rather than on qualitative management. Although the government has long pursued a “small but strong” army as well as “a few good men” systems, the slogans have not been put into practice. The standing force of 600,000 military personnel from the 1970s has now risen to 680,000. Numerically, the ROK army is ranked sixth in the world, but military spending per soldier is ranked 62nd, far below

that of an advanced army. Such a labor-intensive army is not suitable for a modern military system. This system has resulted from the easy recruiting of soldiers through conscription as well as limited budgets and the role of South Korean soldiers under the joint ROK-U.S. defense system against the North, which is centered on a ground army.

Second, with respect to ranks and service types, the Korean military system has a high ratio of soldiers with short-term and mandatory service. About 75 percent of soldiers are conscripted and serve for a short time while commissioned officers, warrant officers, and noncommissioned officers (NCOs) account for only about 25 percent of the force. The ratio of privates to officers is the highest in the world.<sup>1</sup> Meanwhile, about half the commissioned officers and NCOs are not professional soldiers but serve only for a short term through mandatory service. Therefore, about 80 percent of the Korean soldiers serve in the army for less than three years. The MND desires to transition to a more professional, volunteer military, and the ROK has used the current high national level of unemployment to recruit more volunteers. Even so, the number of young men volunteering to be officers or NCOs without prior service represents only about six percent of the young male population. Many of these volunteers join to avoid the draft and would not volunteer without it.<sup>2</sup>

Further, a system of “mass-recruitment – short-term operation – mass-discharge” has been maintained. Due to the high ratio of short-term soldiers, a large number of soldiers are brought in, but they are utilized only for a while before being discharged. As a result, manpower utilization is inefficient compared with the costs. About 250,000 new soldiers are recruited every year, but the same number of trained soldiers is discharged. Therefore, the costs of training and administration are high while the retention of specialized and experienced soldiers is greatly limited.

Additionally, women and technical staffs are not utilized effectively. Female soldiers account for only 0.5 percent of the army and 2.3 percent of commissioned officers and NCOs. Women can hardly be found among officials of the MND and the

---

<sup>1</sup> Young Jin Cho, Kwan Ho Cho, Kil Ho Chung, Ju Sung Chung, Won Bae Lee and Ahn Sik Kim, “Defense Manpower Development Plan for an Elite Force,” KIDA, 2005, p. 5.

<sup>2</sup> Bruce W. Bennett, “A Brief Analysis of the Republic of Korea’s Defense Reform Plan,” RAND, 2006, p. 15.

military services. Women rarely perform managerial functions. In addition, the relative size of technical staffs is significantly low, even among public and military officials.

### **C. THE ROK DEFENSE REFORM PLAN 2020**

The MND introduced the DRP 2020 in September 2005. To build a smaller yet stronger defense force, the ROK military has been restructured and modernized over the years. Taking a long-term vision until 2020, the new DRP aims to further transform the defense force from one that is manpower-intensive, military-dominated, and service-oriented to a technology-intensive, civilian-dominated, and jointness-oriented force structure .

Military transformation is a necessary means for resolving problems that have existed in the ROK defense force over the past five decades and not a mere fad in the era of information and globalization. The MND has divided its overarching imperatives into five categories:<sup>3</sup>

1. Reducing military manpower and correcting the service composition,
2. Civilianizing the defense ministry,
3. Strengthening the Joint Chiefs of Staff system,
4. Securing the long-term defense budget, and
5. Maintaining and developing the ROK-U.S. alliance within a cooperative, self-reliant security framework.

The government must obtain nationwide political support to legalize the specific policy measures needed to achieve successful defense reform in the long term. In particular, the government will need to steadily increase the defense budget to finance the reform plan and coordinate, as well as closely cooperate, with the United States to manage the impact of defense reform on the alliance.

Among the five imperatives listed above, correcting the force structure and securing the defense budget necessary for reform will have the greatest direct effect on future manpower policy. Planned changes to the force structure will mean reducing the present force of 680,000 to an elite force of 500,000 by the year 2020. As shown in Table 1, the strength of the army will be reduced from 548,000 to 371,000, the navy from

---

<sup>3</sup> “The Defense Reform Plan 2020,” ROK MND, Seoul, 2005.

68,000 to 64,000, while that for the air force will remain unchanged at 65,000. The ROK military will acquire state-of-the-art weapons systems to address force shortages resulting from the manpower reductions. Besides trimming down the volunteer force, the defense ministry intends to cut back the reserve force by half to 1.5 million, and improve the training of the reserve force.

**Table 1. Manpower Strength Reductions in Defense Reform Plan 2020, by Service**

<b>Year and Reduction</b>	<b>Army</b>	<b>Navy</b>	<b>Air Force</b>	<b>Reserve</b>
<b>2007</b>	548,000	68,000	65,000	3,000,000
<b>Reduction</b>	-177,000	-4,000	0	-1,500,000
<b>By 2020</b>	371,000	64,000	65,000	1,500,000

Source: “The Defense Reform Plan 2020,” ROK MND, Seoul, 2005, p. 5.

The reform plan will need to be financed at a total cost of 621 trillion won, including operation and management costs (349 trillion won) and investment costs (272 trillion won). This will mean increasing the defense budget at a rate of 9.9 percent per annum between 2006 and 2010, 7.8 percent between 2011 and 2015, and 1.0 percent between 2016 and 2020.

The ROK’s planned reform differs from that of the post-Cold War U.S. and European defense reforms, which reduced both manpower and budgets to provide more money for domestic needs. The DRP seeks to improve the qualitative characteristics of the ROK military even as it reduces military manpower and the number of weapons systems. It aims to sustain defense capabilities by obtaining better equipment and higher-quality personnel—as suggested by the U.S. Department of Defense—i.e., to trade quantity for quality.

A critical component of the reform is the move to achieve a better balance among the services. Thus far, the army has comprised 80 percent of the ROK military and

commands a commensurate degree of control in the various joint activities. Almost all of the force reductions will occur in the army, thereby balancing joint assignments with army personnel holding only half of the total positions.

#### **D. OVERVIEW OF CHAPTERS**

This study, consisting of six chapters, aims to evaluate the propriety of voluntary recruitment in Korea, in the face of that society's demand for changes, and to present a reasonable direction for policy. Chapter II explores a conceptual model of a military organization based on an open-system, to identify Korea's current framework and to explore various alternatives. Also, the military service system is examined in terms of its economic and social costs, including the opportunity costs of those who are conscripted.

Chapter III covers military service systems and their general theories. The concepts, types, and cases of the service systems are reviewed to better understand how the systems have been developed.

Chapter IV evaluates the design factors of Korea's military service system through a conceptual model. Rather than using the two-sided approach of conscription versus voluntary systems, the various characteristics of these systems are applied to study the current Korean army, and to determine if a combination of elements might be more appropriate.

Chapter V examines changes in the military environments and political issues. A number of factors are involved in determining a military service system and its structure, including microscopic/macrosopic and international/domestic matters, so that the study is not limited to a single factor. Chapter V also ponders whether the military/economic/political/social factors in Korea are suitable for voluntary recruitment using the conceptual model.

Finally, conclusions and recommendations are presented in Chapter VI. Included here are suggestions for how Korea might meet the defense needs and challenges of the future.

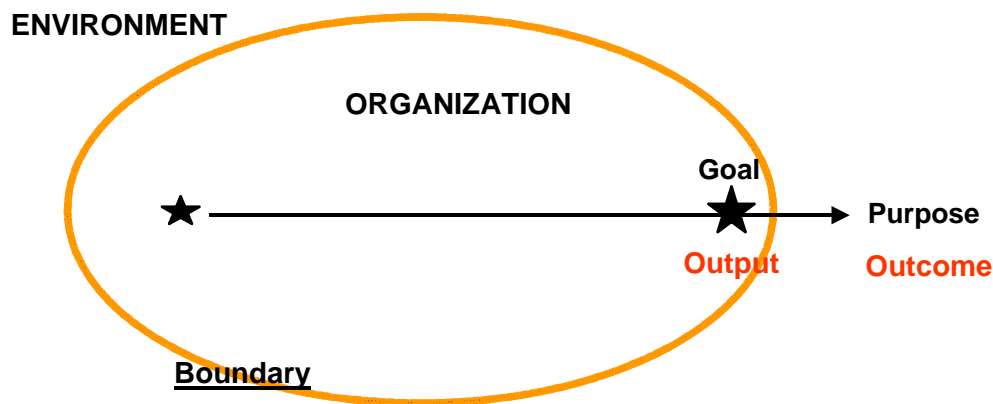
## II. LITERATURE REVIEW

### A. A CONCEPTUAL MODEL FOR DEFENSE ORGANIZATION

#### 1. An Open Systems Model

System theory is basically concerned with problems of relationships, structures, and interdependence, rather than with the constant attributes of objects.<sup>4</sup> Richard Scott writes that “all systems are characterized by an assemblage or combination of parts whose relations make them interdependent but they also suggest the bases for the differences among them.”<sup>5</sup> According to David Nadler and Michael Tushman, organizations have the characteristics of an open system within a larger environment.<sup>6</sup>

A key assumption to open systems theory is that organizations are recognized as purposive—goals that define desired outcomes and a boundary determine the environment, as shown in Figure 1. The boundary varies in terms of permeability. Increased permeability is likely to increase complexity and uncertainty.



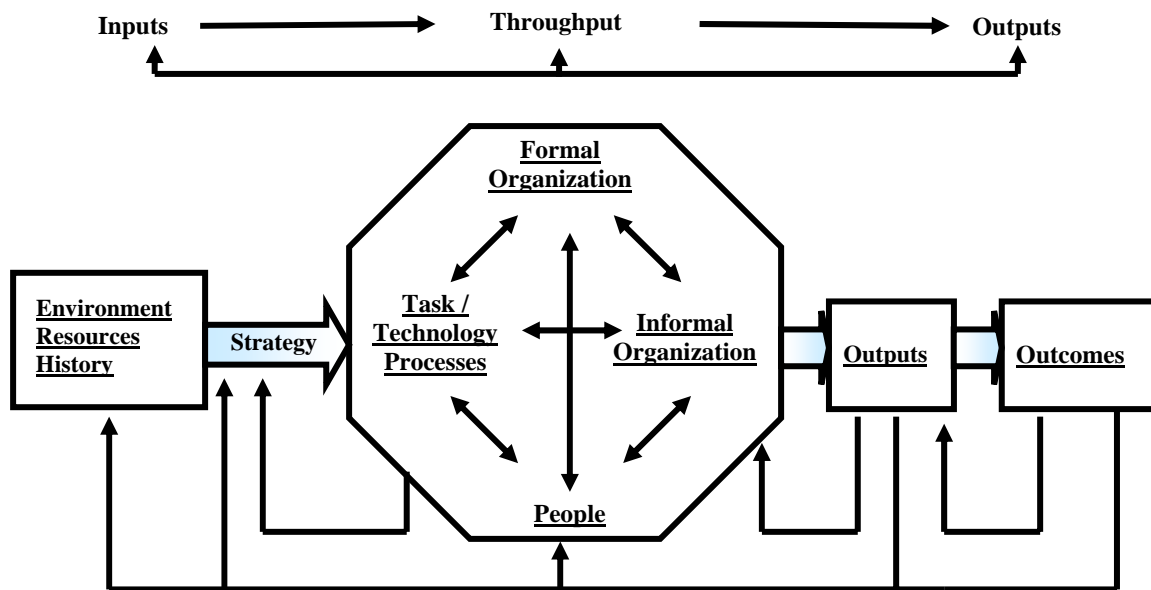
**Figure 1. Open Systems Theory: Organizations are Purposive Systems**

<sup>4</sup> Daniel Katz and Robert L. Kahn, “Organizations and the System Concept,” *The Social Psychology of Organizations*, 1966, p. 3.

<sup>5</sup> W. Richard Scott, “Organizations: Rational, Natural, and Open Systems,” Fifth Edition, 2002.

<sup>6</sup> David A. Nadler and Michael Tushman, “A Congruence Model for Diagnosing Organizational Behavior,” in David A. Kolb, Irwin M. Rubin and Joyce S. Osland., *The Organizational Behavior Reader*, (Englewood Cliffs, New Jersey: Prentice-Hall, 1991).

Figure 2 presents an open systems model. Inputs are environments plus other factors, such as resources and history. Strategy is based on an assessment of environment and then a critical determinant of design characteristics of the system. Design features consist of three elements—tasks, structure, and people. In an open systems model, outputs affect the entire process through feedback. Ongoing adjustments are based on feedback from different goals and measures.



Source: Adapted from Nadler, David A. and Tushman, Michael, "A Model for Diagnosing Organizational Behavior: Applying a Congruence Perspective," *Organizational Dynamics*: Autumn 1980.

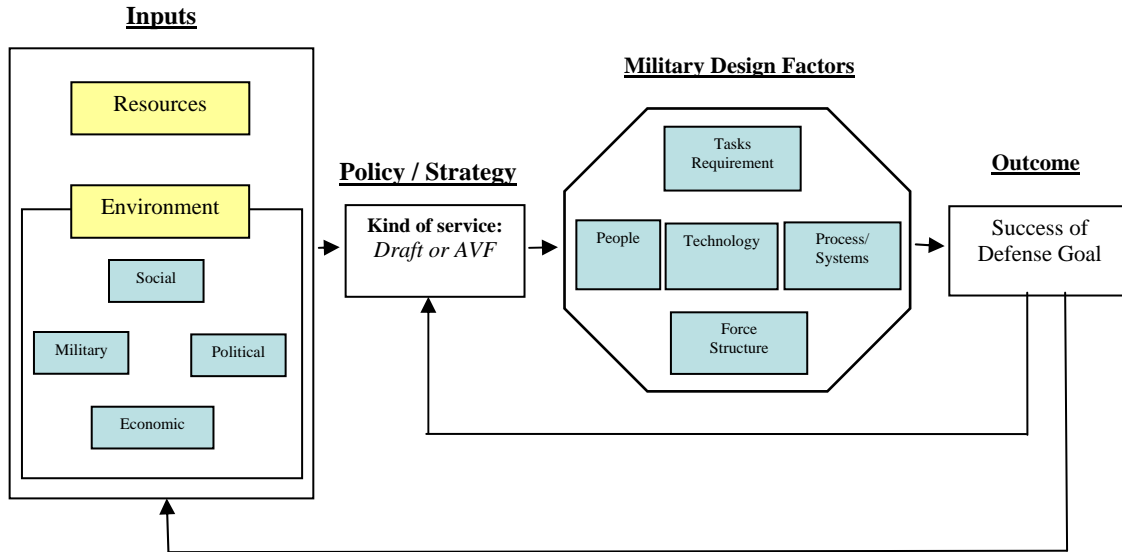
**Figure 2. An Open Systems Model**

## 2. A Conceptual Model for Defense Organization

Figure 3 presents a conceptual model for defense organizations related to the issue of the military service system. This model demonstrates the open systems character of the military organization and highlights the close interrelationship between military, economic, political, and social components in its environment.

We need to set the right defense objective to use the conceptual model for a defense organization, because it is not easy to find a reliable measure of military output in peacetime. This means that it is very important to decide how we determine the defense objective. In peacetime, the best result can be maintaining readiness or managing the

military organization effectively and efficiently with limited resources. The defense goal can be found in a Defense White Paper. To achieve national security goals and defense objectives in the ROK armed forces, the MND consistently focuses military competencies on the following key defense points: “establishing a firm defensive posture and continuously implementing national defense reforms.”<sup>7</sup>



Source: Nadler, David A. and Tushman, Michael, “A Congruence Model for Diagnosing Organizational Behavior,” in David A. Kolb, Irwin M. Rubin and Joyce S. Osland., *The Organizational Behavior Reader*, (Englewood Cliffs, New Jersey: Prentice-Hall, 1991).

**Figure 3. A Conceptual Model of the Defense Organization**

With an analysis of resources and environments, the conceptual model determines the policy/strategy to meet the defense goal that the military wants to shape. The goal is not only the decision itself but also the means to achieve the vision. Successful achievement of the defense goal will occur through the interaction of military factors. These outcomes will affect each step through the feedback process to meet the vision. The vision may even change according to a change in the environment.

This study aims to evaluate the feasibility of using voluntary recruitment in Korea to achieve the defense goal through a conceptual model. The present study estimates

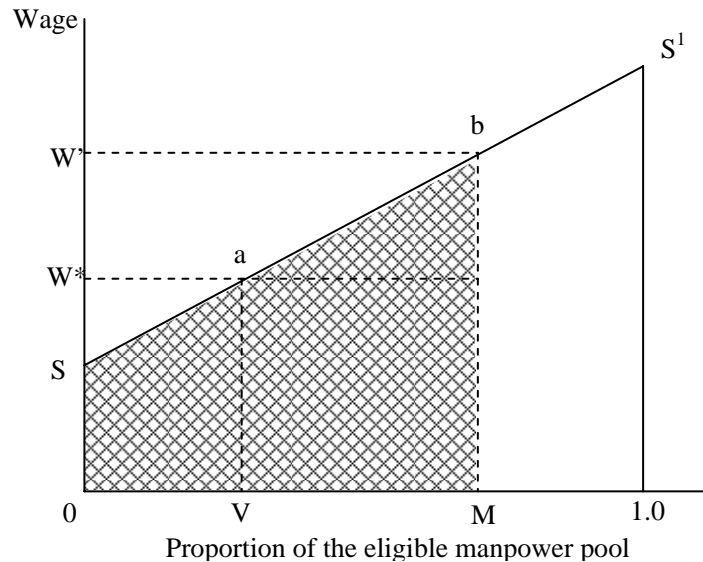
<sup>7</sup> Defense White Paper, ROK MND, Seoul, 2004, p. 54.

what type of military service system Korea maintains at present by providing the critical indicators for defining the military service type and ponders whether the military/economic/political/social factors of Korea are suitable for voluntary recruitment using the conceptual model.

## B. ECONOMIC ANALYSIS OF MILITARY SERVICE SYSTEMS

### 1. Economic Cost

Economic cost is defined as the opportunity cost of serving in the military. An individual's opportunity cost consists of foregone civilian wages plus the net value the individual places on the nonpecuniary aspects of civilian life as compared with military life. The standard labor supply model provides the basic framework to measure economic cost. Aggregating individuals' willingness to provide labor services at increasing prices, we derive the labor supply curve as seen in Figure 4, which shows the number of individuals who will voluntarily join the military for any given wage.<sup>8</sup>



Source: Adapted from Cooper, Richard V. L., "Military Manpower and the All-Volunteer Force," (Santa Monica, CA: *The RAND Corporation*, 1977), p. 72.

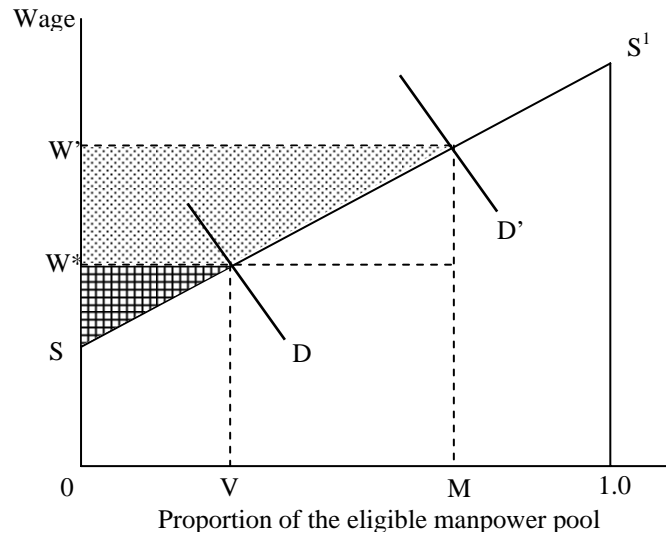
**Figure 4. Measuring the Economic Cost of Military Manpower**

<sup>8</sup> Richard V. L. Cooper, "Military Manpower and the All-Volunteer Force," RAND, September 1977, p. 71.

Suppose that the military demands a force of  $M$  personnel. In the case of a volunteer force, the military must establish a wage ( $W'$ ) that will attract  $M$  volunteers, as displayed in Figure 4. The  $M$  volunteers are individuals whose opportunity cost of military service is less than or equal to  $W'$ . The opportunity cost of the volunteer force is the sum of the opportunity costs of the  $M$  volunteers (area  $SOMb$ ). Under the draft, the government sets a lower wage ( $W^*$ ) and consequently attracts only  $V$  volunteers. The opportunity cost of the draft depends on the method of conscripting to meet the shortfall of  $M - V$  personnel.

## 2. Budget Cost

Budget cost simply equals the number of military personnel times the average wage rate. Economic rent is the excess wage over that for which an individual will serve voluntarily, i.e., the difference between the wage an individual receives and his supply price is equal to his or her economic rent. Budget costs under the draft will be less than under the volunteer system. However, budget costs are actually lower than they appear, because some of the “economic rent”<sup>9</sup> will return to the government as income taxes collected from the military personnel.



Source: Adapted from Cooper, Richard V. L., “Military Manpower and the All-Volunteer Force,” (Santa Monica, CA: *The RAND Corporation*, 1977), p. 92.

**Figure 5. Economic and Budget Cost of Military Manpower**

<sup>9</sup> Richard V. L. Cooper, “Military Manpower and the All-Volunteer Force,” p. 91.

As shown in Figure 5, economic rent is the amount by which the total budget cost, which equals  $W^*$  times  $V$ , exceeds the economic cost, which is the area under the supply curve. This economic rent is merely a transfer payment from taxpayers to those serving in the military and “does not reflect ‘real’ economic activity.”<sup>10</sup>

### **3. Conscription Tax**

A country that maintains a relatively large military force, as compared with its population size, has a tendency to adopt conscription. According to Cooper, “conscription is the standard method of manpower procurement when a country maintains a very large military force relative to its population.”<sup>11</sup>

Conscription imposes an implicit tax on young men of military age. While this conscription tax is not reflected in the accounts of any government agency or revenue collector, it is a real cost for those forced to pay it.<sup>12</sup>

Assuming that individuals qualified for military service are only concerned with the level of monetary income, the conscription tax is the difference between the wage that will induce a conscripted soldier to volunteer and the actual draft wage, i.e., the tax equals the difference between the supply price and the military wage for those who do not enter the military as volunteers. For example, if a conscripted soldier can earn \$10,000 as a civilian, and if his income in the armed forces is \$5,000, his conscription tax is \$5,000.

This implicit tax can be defined as either the amount a person will pay to avoid military service or the difference between the military wage and that necessary to induce voluntary enlistment. Ideally, the implicit tax can be estimated using either definition. For example, individual experiments can be carried out on conscript soldiers to obtain their preferences for civilian life over military service in terms of the increased taxes they are willing to pay to avoid service. However, there are no such readily available data to estimate even approximate measures of this definition of the tax. Figure 6 illustrates the other definition, which states that the implicit tax is the difference between the volunteer

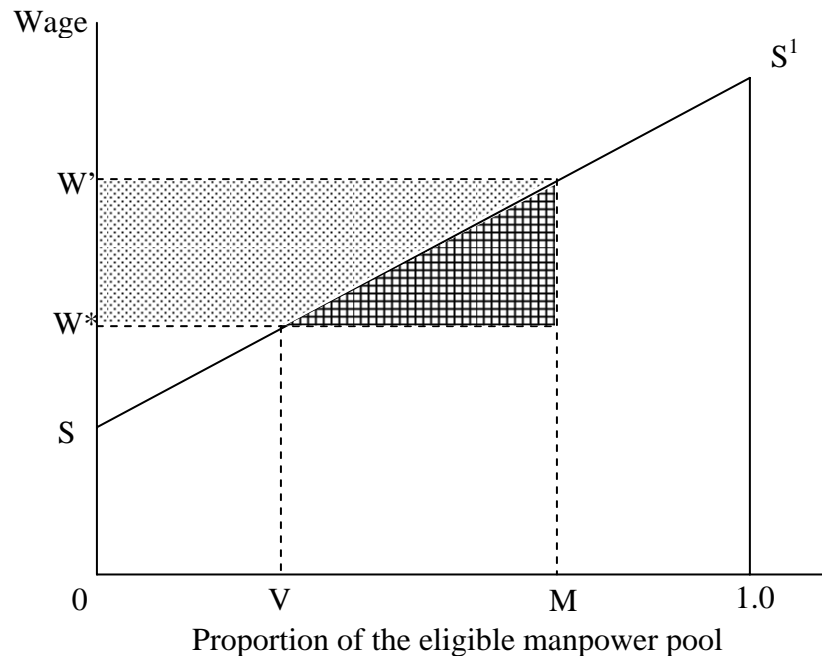
---

<sup>10</sup> Richard V. L. Cooper, “Military Manpower and the All-Volunteer Force,” p. 91.

<sup>11</sup> *Ibid.*, p. 80.

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

supply price and actual compensation. If the military compensation level is  $W^*$ ,  $V$  true volunteers will enlist. If the military requires  $M$  recruits, then  $M - V$  will be reluctant. They will only volunteer if the military wage is raised to level  $W'$ . The implicit tax is represented by the hatched area under the supply curve for a completely volunteer force. The dotted area represents the foregone rents of the  $V$  true volunteers and the opportunity cost to the  $M - V$  conscripted soldiers.



Source: Adapted from Cooper, Richard V. L., "Military Manpower and the All-Volunteer Force," (Santa Monica, CA: *The RAND Cooperation*, 1977), p. 82.

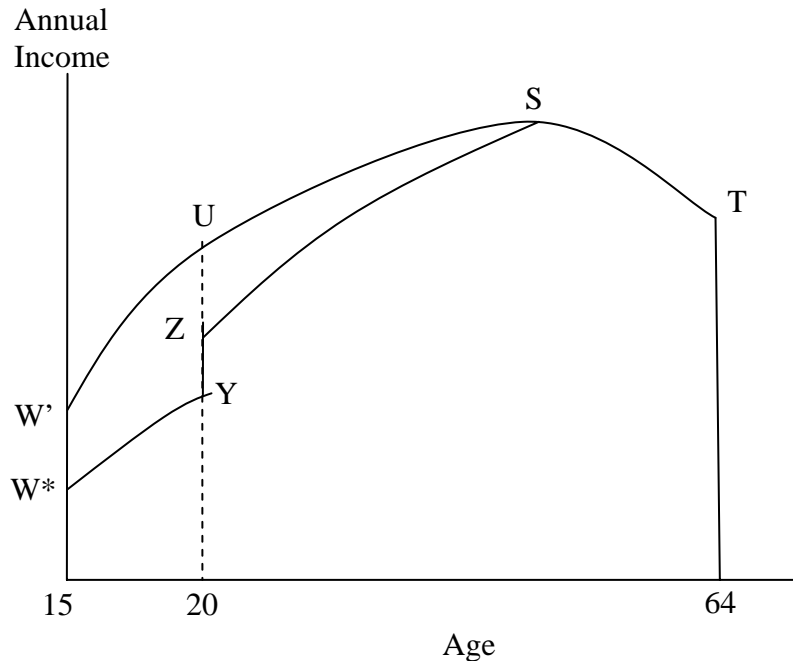
**Figure 6. Measuring the Conscription Tax**

According to J. Ronnie Davis and Neil Palomba, the implicit tax levied on an individual can be measured by the difference between a recruit's foregone civilian earnings and his military compensation.<sup>13</sup> This proxy measures the "financial cost," presuming that a person is indifferent between civilian service and military service at the same wages.<sup>14</sup> In Figure 7, the civilian income stream for one who begins civilian

<sup>13</sup> J. Ronnie Davis and Neil A. Palomba, "On the Shifting of the Military Draft. as a Progressive Tax-in-Kind," *Western Economic Journal*, Vol. 5, No. 2, 1968, p. 151.

<sup>14</sup> Walter Y. Oi, "The Economic Cost of the Draft," in Anderson, Martin with Barbara, Honegger, "The Military Draft," *Hoover Press Publication*, p. 363.

employment after two years of military service is represented by the line W'UST. Davis and Palomba compute his loss for the two years of service as area W\*W'UY. However, his true implicit tax is given by the area W\*W'SZY.



Source: Oi, Walter Y., "The Economic Cost of the Draft," in Anderson, Martin, Barbara, Honegger, "The Military Draft," *Hoover Press Publication*, p. 363.

**Figure 7. Impact on Civilian Income Streams of the Conscription Tax**

According to Cooper, it is important to make explicit the conscription tax because it affects resource utilization and support for the draft. Under a draft system, the budgeted manpower expenditures is a substantial understatement of the true value of labor resources deployed in the military. This often results in over-utilization of labor resources. The conscription tax is also not equal across individuals; this inequity undermines support for the draft system. Individuals facing high conscription taxes have an added incentive to try to avoid the draft. Draft-avoidance costs should be included to determine the overall economic burden of the draft system.<sup>15</sup>

<sup>15</sup> Richard V. L. Cooper, "Military Manpower and the All-Volunteer Force," RAND, September 1977, p. 80.

#### 4. Labor Utilization

The preceding analysis considers supply-side issues. Demand is an equally important aspect since the demand for military manpower is a downward-sloping function of cost.

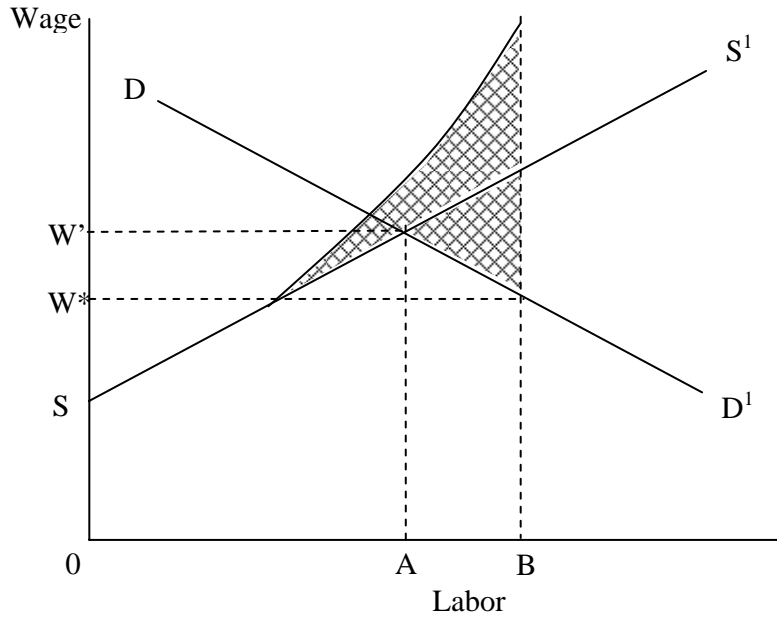
According to Cooper, both income and substitution effects work to bring about a downward-sloping demand curve for military personnel in the long run, i.e., as the price of manpower increases, fewer personnel are demanded, other things being equal.<sup>16</sup> As the price of manpower increases, other military inputs become relatively less expensive, causing the military to substitute these inputs for manpower (substitution effect). The increase in the price of manpower makes it more expensive to maintain any given level of defense capability, causing the government to consume less defense services (income effect).

The true economic cost is often not fully reflected in budgeted manpower expenditures. Under a draft system, budgeted manpower expenditures understate the economic costs, resulting in overutilization of military manpower. The converse may occur in the absence of a draft if the military is a monopsonistic employer facing an upward-sloping supply curve for labor.<sup>17</sup> Figure 8 shows the deadweight loss arising under a draft (shaded area).

---

<sup>16</sup> Richard V. L. Cooper, "Military Manpower and the All-Volunteer Force," p. 74.

<sup>17</sup> Ibid.

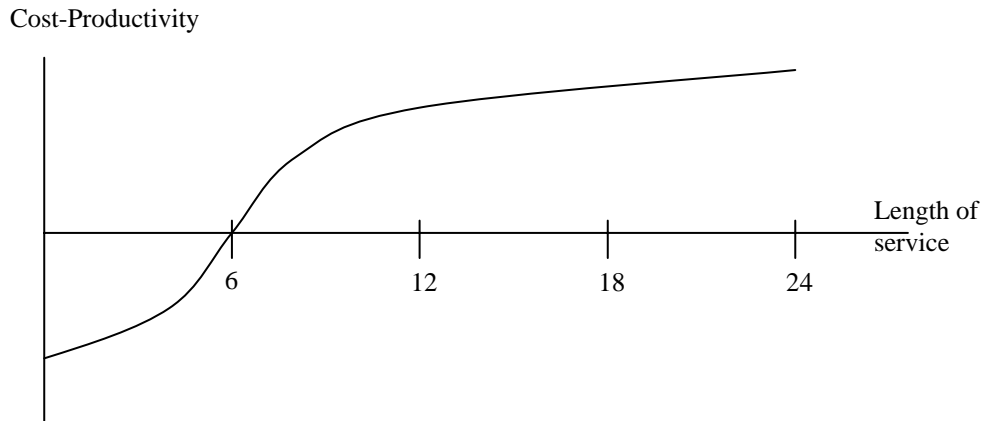


Source: Adapted from Cooper, Richard V. L., "Military Manpower and the All-Volunteer Force," (Santa Monica, CA: *The RAND Corporation*, 1977), p. 76.

**Figure 8. Overemployment of Labor with the Draft**

### 5. Labor Turnover

Manpower turnover rates vary inversely with the length of service (LOS). The average LOS is shorter under a draft as compared to an all-volunteer force. Manpower turnover rates are therefore higher for a draft system, negatively affecting military productivity and efficiency. Conscription becomes an inefficient means for maintaining force strength if the LOS is very short, especially when significant numbers of technical personnel are required. For example, some jobs, such as driving a tank or an armored fighting vehicle (AFV), require at least 12 months of training and experience to enable soldiers to perform well. Figure 9 shows that a certain length of time is required for one to acquire the necessary skill to perform the job well.



Source: Adapted from Barron, John M. and Berger, Mark C., "On-the-Job Training," *W.E. Upjohn Institute for Employment Research*, 1997, p. 23.

**Figure 9. Productivity by the Length of Service**

THIS PAGE INTENTIONALLY LEFT BLANK

### **III. BACKGROUND OF MILITARY SERVICE SYSTEM**

#### **A. UNDERSTANDING MILITARY SERVICE**

##### **1. Concepts of Military Service**

Defense power refers to the power of protecting and maintaining the lives and properties of people by establishing sovereignty through military means.<sup>18</sup> A nation's defense power is represented by its combat capability. A key purpose of defense power is to repel the intrusion of foreign forces. However, the more important goal is to deter aggression with solid military readiness. Defense power is a function of trained manpower resources, firepower, and equipment. Without well-trained soldiers, the battle cannot be won. A military service requirement allows a nation to mobilize sufficient manpower to carry out military activities and prepare for war.

The term "military service" refers to the carrying out of military service duties through enrollment in the military.<sup>19</sup> Military service is service in the army, navy, air force, or any other military organization, either as a chosen job or as the result of a compulsory draft. In general, there should be conviction that military service is a promise to the people of the country and that military service members must do their best mentally and physically in serving their country. Military service therefore constitutes a kind of personal burden to meet military manpower demands.

This concept of military service espouses basic values, which have been accepted since the emergence of modern democratic countries. The origins of conscription can be traced back to the developments and processes set in motion across Europe by the French Revolution and Napoleonic wars. As a 1798 French Act stated during the Levée en Masse, "Any Frenchman is a soldier and owes himself to the defense of the nation."<sup>20</sup> Historically, after the French Revolution, France abolished absolute monarchy and the class system, choosing to adopt a national system premised on equal civil rights. As

---

<sup>18</sup> Doo Sung Kim, "Military Manpower Affairs," Seoul, Cheilsa, 2002, p. 13.

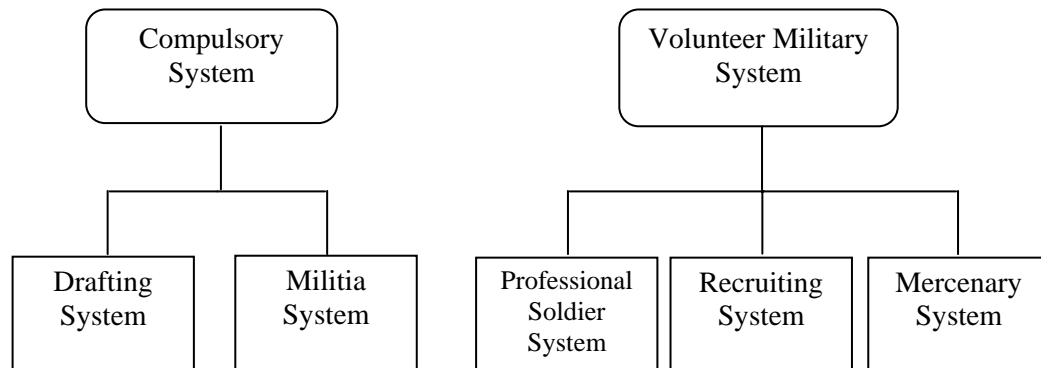
<sup>19</sup> Ibid., p. 14.

<sup>20</sup> Tomas Jermalavicius, "Conscription Debate in Lithuania : How to Approach the Issue?," *Baltic Defense Review* No. 8 ,Vol. 2, 2002, p. 24.

opposed to the monarchy and the feudal system, citizens are the main body that should protect the country from others since the nation is now citizen-centered. Defending the country becomes the general duty of all citizens. Military service becomes an incarnation of a citizen’s status and rights. This link is one of the most powerful sustaining factors for conscription. Although the Industrial Revolution of the 19<sup>th</sup> century has profoundly altered the character of war, it has also increased reliance on manpower resources to offset the increased destructive power of weapons and even facilitated manpower deployment through new inventions, such as railways and telegraph communications.<sup>21</sup>

## 2. Types of Military Service Systems

Generally, the military service system can be classified as either a compulsory system, a voluntary system, or even a hybrid of both, as shown in Figure 10.<sup>22</sup>



Source: An, Seok-Ki, Jeong, Joo-Seong, Jeong, Won-Young, “New Environmental Change and Development of Military Service”, KIDA, 2003, p. 26.

**Figure 10. Types of Military Service Systems**

### a. Compulsory Systems

Under a compulsory system, military service is mandatory based on the concept that the citizens of a nation are responsible for the defense of their country. The compulsory system can be further defined as either a drafting system or a militia system.

<sup>21</sup> Alan Forrest, “Conscription as Ideology: Revolutionary France and the Nation in Arms,” *The Comparative Study of Conscription in the Armed Forces*, ed. Lars Mjose and Stephen Van Holde (Oxford: Elsevier Science, Ltd, 2002), p. 95.

<sup>22</sup> Seok-Ki An, Joo-Seong Jeong, Won-Young Jeong, “New Environmental Change and Development of Military Service,” KIDA, 2003, p. 26.

- Drafting system. A drafting system is based on universal conscription. Every citizen is subject to the military service requirement. Recruited soldiers undergo education and training to become elite soldiers. Military service is for a set duration and soldiers are transferred to reserve units thereafter for mobilization during an emergency or for a war.
- Militia system. As with a drafting system, the militia system is also based on universal conscription. The purpose of military training is to cultivate and maintain the military force economically. The officer positions are filled with volunteers. All citizens receive short-term basic military training and, in times of peace, people carry on with their lives. In an emergency, such as a war, citizens are summoned for military service.

#### ***b. Voluntary Systems***

A volunteer military system is also called a free military system, whereby individuals enlist for military service of their own free will, signing a contract with the nation. The professional soldier system, recruiting system, and mercenary system belong to this category.

- Professional Soldier System. Under this system, people are soldiers by profession. Those who are willing to serve long-term in the military become commissioned or noncommissioned officers, and receive sufficient salary to support a family.
- Recruiting System. With a recruiting system, people sign a contract and serve in the military by enlisting in a specific armed force, service branch, and position..
- Mercenary System. In a mercenary system, military service is primarily for personal financial enrichment. The salary and service period are specified in a contract. Foreigners may enlist for military service. A good example of the system from history is France's Foreign Legion, which still exists today as a restructured, elite unit of mostly foreign volunteers.

Each country has a different type of military service, depending on personnel/material availability and political conditions. Three aspects of military service are particularly important in further defining it : military purpose (training, home defense, general); length of service (six months, a short tour up to three years, a long tour of more than three years, part-time reserve duty); and method of conscription (universal, random, class-based, selective).<sup>23</sup> An analysis of military service systems is presented in Table 2.

---

<sup>23</sup> Eliot A. Cohen, "Citizens and Soldiers – the dilemmas of military service," *Cornell University Press*, 1985, p. 22.

Table 2. Analysis of Military Service Systems

<b>System</b>	<b>Description (examples)</b>	<b>Military Purpose</b>	<b>Length of Service</b>	<b>Method of Recruitment</b>
Expansible	Large masses of conscripts or volunteers are trained for war by a cadre of professional soldiers during peacetime. (The German Army 1920-1935)	Training	Long Tour	Voluntary
Universal Military Training (UMT)	A short period of military instruction is required of all physically fit young men during high school or shortly after. (Pre-World War I Australia)	Training	Six Months	Universal
Militia	Sporadic training during the year (e.g., a weekend a month) for men selected by a number of possible methods. These men continue to pursue civilian careers and perform active duty only in times of invasion or general war. (United States National Guard, British Territorial Army, the Swiss Army)	Home Defense	Part-time + Initial training	Any
Cadre / Conscription	Conscripts are trained and led by a cadre of professional NCOs and officers to become part of a nation's standing force. (The Republic of Korea Army, United States Army 1948-1973)	Home Defense / General Purpose	Short Tour	Universal, Random, Selective
AVF	Volunteers, most of whom serve only one tour and then leave the military, are trained and led by a cadre of professional NCOs and officers. (United States Army 1973-present)	General Purpose	Short Tour	Voluntary
Ancient Regime Conscript	Long-tour compulsory military service for certain classes, e.g., day laborers and nobles. Class-based statutory exemption of men from military service. (Frederician Prussia)	General Purpose	Long Tour	Class-based
Professional	Military service regarded as a career by all including rank-and-file soldiers. (British Army from the 1700s to present, with the exception of the World Wars)	General Purpose	Long Tour	Voluntary, Random
Selective Service	Military service selection on the basis of overall usefulness to the total (i.e., economic and military) war effort. (The United States 1914-1918, 1940-1946)	General Purpose	Long Tour	Selective

Source: Cohen, Eliot A., "Citizens and Soldiers – the Dilemmas of Military Service," *Cornell University Press*, 1985, p. 23.

Countries often adopt hybrid systems or have changed their military system for political, economic, social, and military reasons. Hybrid systems are adopted in accordance with countries' characteristics to provide the advantages of both the draft and volunteer systems. Currently, South Korea has adopted a hybrid system encompassing the UMT, Cadre/Conscription, and Professional systems. The United States Army has also changed its military service system for the same reasons.

### **3. Determining Factors**

The means of acquiring the necessary manpower for military service, as well as the form of military service system, are determined by the nation's structure and circumstances. A policy decision on the appropriate military service system must be made after considering such factors as the geopolitical situation, propensities of neighboring states, political and economic situations, characteristics of people, society, culture, and climate. In particular, countries have chosen their military service systems according to their unique interdependent political, economic, social, and military factors. Such factors are important considerations in the decision to change the military service system or retain the status quo. For example, if there is a significant military threat or budget constraints to reform because of the economic situation of the country, the existing military service system is likely to be retained. If there is strong social demand by the people or sufficient capability to transform to an AVF system, a change in the military service system is probable. The determining factors for the ROK military are analyzed in Chapter V .

## **B. MILITARY SERVICE SYSTEMS OF MAJOR COUNTRIES**

### **1. France**

France has embarked on a series of reforms that have resulted in the downsizing of its military force.<sup>24</sup> This came about as the security threats diminished with the end of the Cold War. Three factors are shaping French and European post-Cold War militaries:

---

<sup>24</sup> Ronald Tiersky, "French Military Reforms and Strategy," *Institute for National Strategic Studies and the National Defense University*, 1996, p. 3.

1) disintegration of the Soviet Union; 2) budgetary pressures; and 3) new post-Cold War missions.<sup>25</sup> The 1996 Chirac plan to downsize and modernize the French military, combined with similar British and German plans, outlines what the post-Cold War European military front will be. The Chirac reform shrinks the military force from about 500,000 to 350,000. The resulting surplus of draftees and the need to maintain equity became major issues for the French military. The service term had to be reduced to solve the problems. To prevent combat strength from falling further, the French military expanded the volunteer system. The French military eventually adopted the all-volunteer system in 2003, which consists of professional soldiers.<sup>26</sup>

## **2. Germany**

Before reunification, Germany was a strong supporter of conscription and even lengthened the service term due to a lack of draftees. However, the end of the Cold War and reunification eased tensions. This reduced the need for a large military force while the number of conscripts increased, giving rise to problems similar to those of France. Despite efforts to adjust the system, maintaining equity became an issue and draft-dodging kept increasing, given the sudden changes in national security. The reduction in the service term failed to prevent draft evasion by German youth. This led the German government to increase the number of alternative services while decreasing the number of conscripts. The German military system is close to a voluntary system given the short length of service (nine months in the military or in an alternative civilian service). It is possible that a completely voluntary system will be introduced soon.<sup>27</sup>

## **3. Italy**

Italy has also drastically reduced its military force due to reduced tensions in the region and shortened the service term to manage the surplus of draftees. To maintain its

---

<sup>25</sup> Ronald Tiersky, "French Military Reforms and Strategy," p. 1.

<sup>26</sup> Joo Seong Cheong, "Vision of Military Manpower Affairs and Policy," KIDA, 2000, p. 95.

<sup>27</sup> *Ibid.*, p. 87.

combat force, Italy has promoted voluntary systems, including the concept of a long-term service soldier, which is closer to a professional soldier. The conversion to a completely voluntary system is currently being carried out in Italy.<sup>28</sup>

#### **4. Israel**

Israel faces daily security threats with its neighboring Arab countries. Thus, Israel applies a complete and almost perfect conscription system to all its people, including women, to build a vast military force. Exemption from military service is granted only for religious reasons.<sup>29</sup>

#### **5. Taiwan**

Changes in Taiwan's military system are different from those of European countries. Due to serious tensions between Taiwan and China, the Taiwanese government has maintained a strong conscription system, having all who are eligible complete military service. Nevertheless, acknowledging the limitations of the traditional approach to warfare, which is dependent on conventional weapons and the size of military force, Taiwan has implemented plans for military reform and reduce the size of its army in the process. Taiwan has therefore also reduced the service term to deal with the surplus of conscripts. To prevent a weakening of the combat force, more voluntary soldiers, such as commissioned officers, are hired.<sup>30</sup>

#### **6. China**

China was a major axis in the Cold War and supported a strong conscription system, reflecting the characteristics of socialism. However, alleviated tensions and loss of ideological conflict with the collapse of the socialist system, along with the pursuit of practical courses of action, led China to pursue a qualitatively, rather than a quantitatively, strong army. As a result, China reduced its military force and service term in 1999.

---

<sup>28</sup> Joo Seong Cheong, "Vision of Military Manpower Affairs and Policy," p. 82.

<sup>29</sup> Dmitry Litovkin, Svetlana Babaeva, "A Professional Military: For and Against," *CDI Russia Weekly*, 2003, p. 2.

<sup>30</sup> Joo Seong Cheong, "Vision of Military Manpower Affairs and Policy," KIDA, 2000, p. 87.

China's military force now comprises compulsory and voluntary soldiers, with the focus on promoting the system of voluntary soldiers and not maintaining a large-scale military force. Consequently, a larger number of voluntary soldiers serve in China than ever before.<sup>31</sup>

## **7. Russia**

Russia has had a conscripted army since 1918, enlisting approximately 400,000 young men between the ages of eighteen and twenty-seven each year.<sup>32</sup> There is increasing draft avoidance in recent years with rising concerns about endemic hazing, deployment to Chechnya, or better career opportunities.<sup>33</sup> Many cities throughout Russia face difficulty meeting draft quotas. This has led military officials to cut conscription quotas; the quota was reduced by 20 percent in the spring of 2002, where just over 160,000 draftees were required, as compared with about 200,000 people in each of the two conscription periods in the past. In 2006, the Defence Ministry announced its plan to reduce the length of service to 18 months over time, accelerating earlier plans supported by the uniformed leadership which had foreseen the transition to a contracted, rather than conscripted force to start in 2011.<sup>34</sup>

## **8. Japan**

Japan's defense force was established under the Self-Defense Forces Law of 1954 and is under civilian control.<sup>35</sup> The Japanese armed forces are meant to ensure self-defense under the current Japanese constitution, although Japan has increased its Self

---

<sup>31</sup> China's National Defense in 2004, Information Office of the State Council of the People's Republic of China, Beijing, 2004.

<sup>32</sup> Human Rights Watch, "Conscription Through Detention in Russia's Armed Forces," *Human Rights Watch Publication*, Vol. 14, No.8, 2002, p. 1.

<sup>33</sup> *Ibid.*, p. 2.

<sup>34</sup> Human Rights Watch, "Conscription Through Detention in Russia's Armed Forces," *Human Rights Watch Publication*, Vol. 14, No.8, 2002, p. 4.

<sup>35</sup> Global Security, "Military," Adapted from <http://www.globalsecurity.org/military/world/japan/jda.htm>; Internet; Accessed 8 March 2007.

Defense Forces' participation and role in international military activities, including peacekeeping operations (PKOs) and support for the reconstruction of Iraq.<sup>36</sup>

## **9. United States**

The U.S. is currently the world's police force and has adopted a completely voluntary system, on the assumption that direct security threats hardly occur within the country, except for terrorist attacks such as "9-11." However, the U.S. maintains reserve forces, which are trained similarly as the standing army and have the nature of professional soldiers. Further, its military system is flexible enough to transform into a mandatory one if required. Although the U.S. military relies heavily on high-cost and cutting-edge weapons, the military faces a challenge recruiting sufficient soldiers when a military career loses its appeal to people. Therefore, the U.S. spends a relatively large amount of money to maintain its military force through re-engagement bonuses, educational benefits, and so on. Although the U.S. has adopted a completely voluntary system, it faces the problems of high expenses and loss of social representativeness in its military.<sup>37</sup>

## **C. CHARACTERIZING CHANGES IN MILITARY SERVICE SYSTEMS**

As seen here, the major trend in the military systems of major countries is a shift from conscription to the hybrid of mandatory and voluntary systems or to completely voluntary systems. Countries that have introduced the hybrid system seem to have experienced a surplus of conscripts and a problem maintaining equity with the easing of security threats and reduction in military forces. They shortened the military service term to resolve these problems and increased the number of voluntary soldiers to maintain combat strength. Israel, on the other hand, has an existing security threat and therefore still strongly supports conscription. As demonstrated by the U.S., countries intending to introduce voluntary systems will need to grapple with the problems of enormous expenses to find sufficient volunteers and loss of social representativeness in the military.

---

<sup>36</sup> Defense White Paper, ROK MND, Seoul, 2004, p. 28.

<sup>37</sup> Joo Seong Cheong, "Vision of Military Manpower Affairs and Policy," KIDA, 2000, p. 83.

Three elements characterize the changes in military systems discussed above. First, changes in military systems are preceded by the easing of tensions and military reforms that result in a reduction in the military force. Second, military reforms generally involve moving to a hybrid of mandatory and voluntary systems or a completely voluntary system. Germany, Taiwan, and China are examples of countries that have adopted the hybrid system. The reduced demand for conscripts, given a reduction in the military force, resulted in a surplus of draftees. This increased the difficulty of maintaining equity amidst rising evasion of the draft. The service term often had to be shortened to deal with these problems. Germany, Taiwan, and China shortened the service term for these reasons as well as to ease the burden of military service at the same time. These countries increased their corps of professional voluntary soldiers to strengthen their combat forces, which have been weakened by the reduction in the conscript force as well as the decrease in the number of experienced soldiers, given the shortened service term. The hybrid system alleviated the side effects of introducing voluntary systems and allowed for a soft landing. Third, countries that are easing up on conscription have introduced alternative forms of duty to solve the surplus of draftees. With strict restrictions on the number and stringent selection criteria, the equitableness of the military system can be maintained and draft-dodging reduced.

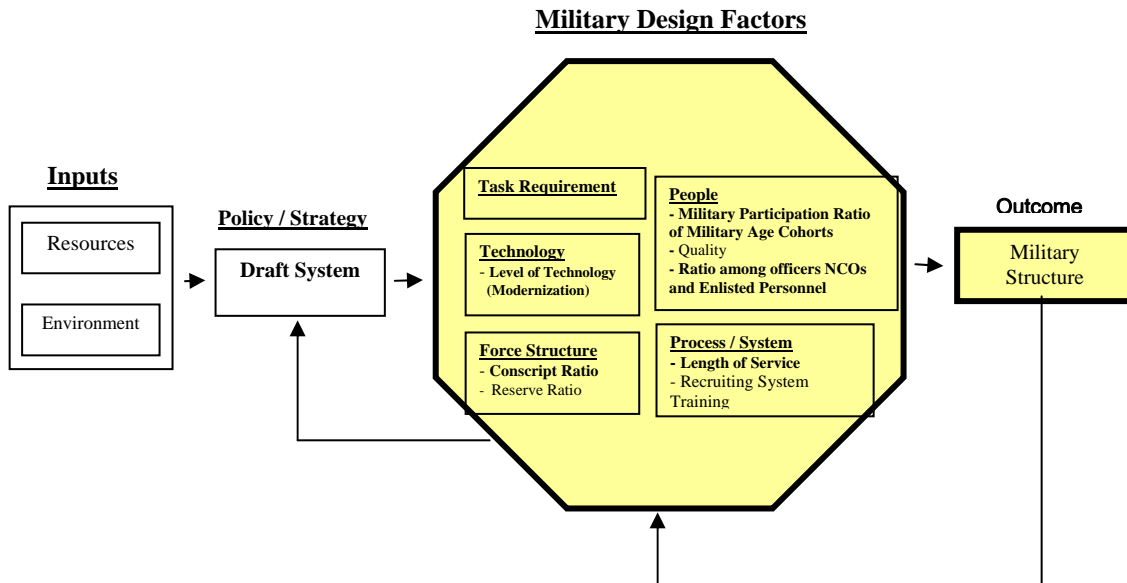
In summary, military service system changes are driven by security conditions, military reforms, and the scale of military resources to be managed. In particular, changes in security environment constitute the most important factor in deciding on the appropriate type of military service. Changes in the type of military service must be enabled by substantial innovation in the national security system. In Korea, as the last divided country in the world, the security environment has not significantly changed since the Cold War era. However, recent reconciliation efforts with North Korea, an enhanced military capacity, and the citizens' perception of a need for military service will be important considerations in determining the right military service system for Korea.

## IV. ANALYSIS OF MILITARY DESIGN FACTORS

### A. INDICATORS OF MILITARY DESIGN FACTORS

This chapter analyzes military design factors to understand the current structure of the Korean army and its differences with other countries that maintain a voluntary service system or something similar to such a system. By doing so, the potential of the Korean army for introducing a new system can be judged.

Military design factors provide critical indicators for defining the military service type. Five interdependent design factors can be identified within the military setup: task requirement, people, process/system, technology, and force structure, as shown in Figure 11. Haltiner proposes indicators to determine the service format according to these design factors, including the military participation ratio (MPR), conscript ratio (CR), gross national product (GNP) per capita, women's participation rate and so on.<sup>38</sup>



Source: David A. Nadler and Michael Tushman, "A Congruence Model for Diagnosing Organizational Behavior," in David A. Kolb, Irwin M. Rubin and Joyce S. Osland. *The Organizational Behavior Reader*. (Englewood Cliffs, New Jersey: Prentice-Hall, 1991)

**Figure 11. Military Design Factors**

<sup>38</sup> Karl W. Haltiner, "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol. 25, 1998, p. 12.

The following analysis focuses on five feasible indicators relevant to the ROK military: overall CR, military participation ratio of the military-age cohort (MPRMAC), officers/NCOs/enlisted personnel ratios, conscript ratio in the air force (CRAF) and the navy (CRN), and length of service (LOS) to determine the most appropriate service format for the ROK military. These indicators are presented in Table 3.

**Table 3. Military Design Indicators**

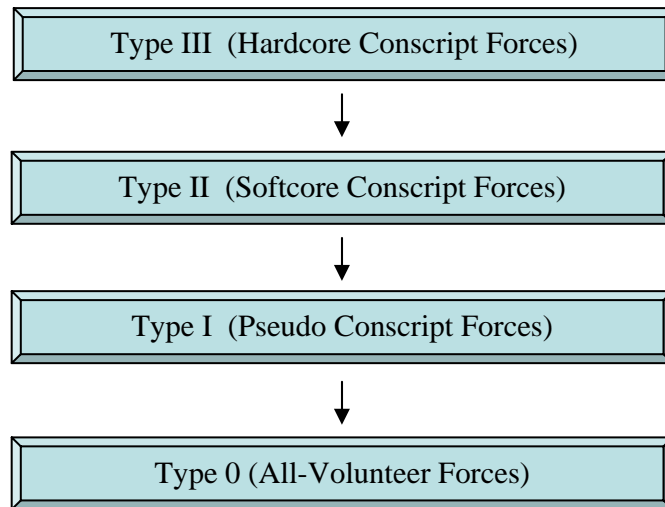
Indicators	Description
Overall Conscript Ratio (CR)	Significant indicator of a nation's military organizational format
Military Participation Ratio of the Military-Age Cohort (MPRMAC)	Indicator of military service burden incidence
Officers/NCOs/Enlisted Personnel Ratio	Indicator for possibility of future military force reduction
Conscript Ratio in the Air Force (CRAF) and the Navy (CRN)	Indicator of technology level
Length of Service (LOS)	Indicator to determine possibility of introducing a voluntary enlistment system

### 1. Overall Conscript Ratio (CR)

The overall CR is defined as the ratio of draftees to all active members in the armed forces. The internal structure of military organizations can be reflected through the CR. Therefore, the CR is one of the most significant indicators of a nation's military organizational format.<sup>39</sup> The classification (or type) of military organizations according to their CRs is shown in Figure 12.

---

<sup>39</sup> Karl W. Haltiner, "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol. 25, 1998, p. 13.



Source: Haltiner, Karl W. "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol 25, 1998, p. 18.

**Figure 12. A Typology Force Structure and Expected Changes**

**a. Type 0 (All-Volunteer Force)**

Countries with a CR of zero percent are considered to have an AVF. Zero-draft countries include the United States, the United Kingdom, Canada, Australia, and Japan.

**b. Type I (Pseudo Conscript Force)**

Countries with a CR below 50 percent are considered to have a pseudo conscript force. Type I military organizations are closer to the AVF than to a conscript force, since volunteers form the majority of the military force.

**c. Type II (Softcore Conscript Force)**

Countries with a CR between 50 percent and 67 percent are considered to have a softcore conscript force. According to Haltiner, Type II military organizations tend to conscript more selectively rather than universally.<sup>40</sup> As such, universal conscription is often brought up as a political issue, centering attention on the development of a more equitable military service system.

<sup>40</sup> Karl W. Haltiner, "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol. 25, 1998, p. 17.

**d. Type III (Hardcore Conscript Force)**

Countries with a CR above 67 percent are considered to have a hardcore conscript force. Switzerland has a near 100 percent CR and conscripts all its officers, similar to the militia system .

In general, countries make gradual transitions from one format to another. Most European countries have changed their military systems from a Type III to a Type II and then to a Type I, before progressing to Type 0.

**2. Military Participation Ratio of the Military Age Cohorts (MPRMAC)**

The MPR is defined as the size of the military force (actives and reserves) as a proportion of the country's population. The MPRMAC is defined as the ratio of draftees to all individuals belonging to particular age cohorts.<sup>41</sup> According to Haltiner, the MPRMAC indicates how the military service burden is distributed.<sup>42</sup> Even if a nation conscripts only a small proportion of its force, its MPRMAC can still indicate an equitable distribution of the military service burden if it uses an appropriate military system. Similar to the CR, MPRMAC also helps categorize military organizations.

**3. Officers/NCOs/Enlisted Personnel Ratio**

The commissioned officer/NCO/enlisted personnel ratio is a critical indicator for the future reduction of military forces and introduction of a voluntary system.<sup>43</sup> In a technology-oriented army, the percentage of NCOs who are skilled soldiers is relatively high, and an effective army can be maintained. The percentage of enlisted personnel will also be high in countries that support conscription, while the percentage of commissioned officers is about 10-15 percent. This is similar to a voluntary enlistment system. The percentage of NCOs will be higher the closer the military service format is to a voluntary

---

<sup>41</sup> Karl W. Haltiner, "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol. 25, 1998, p. 19.

<sup>42</sup> Ibid.

<sup>43</sup> Young Jin Cho, "Defense Manpower Management for Technology-intensive Forces," KIDA, 2006, p. 20.

system, leading to a more effective army, since more skilled personnel are employed. As the percentage of volunteers increases, transition to a voluntary system is easier, since it becomes less difficult to recruit soldiers voluntarily.

#### **4. Conscript Ratio in the Air Force (CRAF) and the Navy (CRN)**

The level of military technology can be inferred from the percentage of conscripts serving in a country's air force and navy.<sup>44</sup> Judging by the CRAF and CRN indicators of different military organizational formats, Type I and Type II military forces exhibit a distinctly higher level of technology than Type III forces. Under a Type III military organizational format, all services of the armed forces resemble a mass army. Significantly more volunteers than conscripts are utilized in the air force and navy in Type I or II military forces. A country's air force and navy play an important role in the transformation to a professional force.

#### **5. Length of Service (LOS)**

The length of service can be used as a yardstick to determine the possibility of introducing a voluntary enlistment system.<sup>45</sup> The shorter the term, the higher the potential. The terms of military service have been shortened in many countries to deal with a declining youth population or a surplus of conscripts. The reduced service term results in an increased number of NCOs. In general, the minimum service term is one year, since the nature of military duties requires soldiers to receive at least a year of military education to cultivate the military spirit and build up capabilities to carry out military duties. However, one year of training may be too short, since effective combat capability is obtained only after a year. Most countries maintaining a conscription system require two years of military service.

### **B. ANALYSIS OF INDICATORS FOR THE ROK MILITARY**

Based on the research results of Haltiner, the indicators to determine the respective military organizational formats are provided in Table 4. For example, the CR

---

<sup>44</sup> Karl W. Haltiner, "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol. 25, 1998, p. 22.

<sup>45</sup> Seok-Ki An, Joo-Seong Jeong, Won-Young Jeong, "New Environmental Change and Development of Military Service," KIDA, 2003, p. 83.

is > 67 percent for a Type III military force, 50-66 percent for a Type II force, and < 50 percent for a Type I force. In terms of MPRMAC and CRAF/CRN, > 60 percent, 30-60 percent, < 30 percent will reflect a Type III, II and I force, respectively. As for the commissioned officers/NCOs/enlisted personnel ratio, the percentage of commissioned officers is 10-12 percent in all three formats, while the ratio of NCOs to enlisted personnel is 20:70, 29:60, and 38:50 in a Type III, II and I force, respectively. The mandatory service term is > 19 months for a Type III force and < 12 months for a Type I force. The results of applying Haltiner’s criteria for defining a conscription system to the ROK military are also presented in Table 4.

**Table 4. Military Design Indicators for the ROK Armed Forces**

	Type III	Type II	Type I	ROK	Results
Overall Conscript Ratio (CR)	Above 67 %	50-67 %	Below 50 %	77%	Type III
Military Participation Ratio of the Military-Age Cohort (MPRMAC)	Above 60 %	30-60 %	Below 30 %	77%	Type III
Officers/NCOs/Enlisted Personnel Ratio	10:20:70	11:29:60	12:38:50	10:15:75	Type III
Conscript Ratio in the Air Force (CRAF) and the Navy (CRN)	Above 60 %	30-60 %	Below 30 %	Navy: 45% Air Force: 55%	Type II
Length of Service (LOS) (Months)	Over 19	12-18	Less than 12	Army:24 Navy: 26 Air Force: 28	Type III

Source: Based on methodology presented in Haltiner, Karl W. “The Definite End of the Mass Army in Western Europe,” *Armed Forces and Society*, Vol 25, 1998, p. 18.

According to Haltiner’s criteria, all the ratios except the ratio of draftees for the air force/navy, indicate that the Korean military system is Type III (Hardcore Conscript). This implies that the current system will have to be maintained for the time being, since the introduction of a voluntary system requires a country to transition through a Type II and then a Type I military format.

The ROK military is an enlisted personnel-intensive system. The ROK military manpower force structure can be defined as “an excessively personnel-centric structure.”<sup>46</sup> The ROK armed forces accession system heavily depends on the nation’s compulsory military service requirement. The ROK military has never had a problem filling recruiting quotas, unlike the U.S. military, which is currently experiencing recruiting problems in its army and certain reserve branches.<sup>47</sup>

The recent DRP 2020 report presented South Korea’s plans to increase the ratio of more skilled NCOs and lengthen the service term of those who have completed their service by another six months or one year by paying a salary equivalent to that of a college student or novice employee. In addition, the ROK military intends to recruit soldiers with special skills in various fields to make use of their college major or interests. There is ongoing research to study the possibility of shortening the conscript period from 24 months to 18 months to ease the people’s burden of military duty. All of these plans demonstrate that Korea is undergoing a shift from Type III (Hardcore Conscript) to Type II (Softcore Conscript).

---

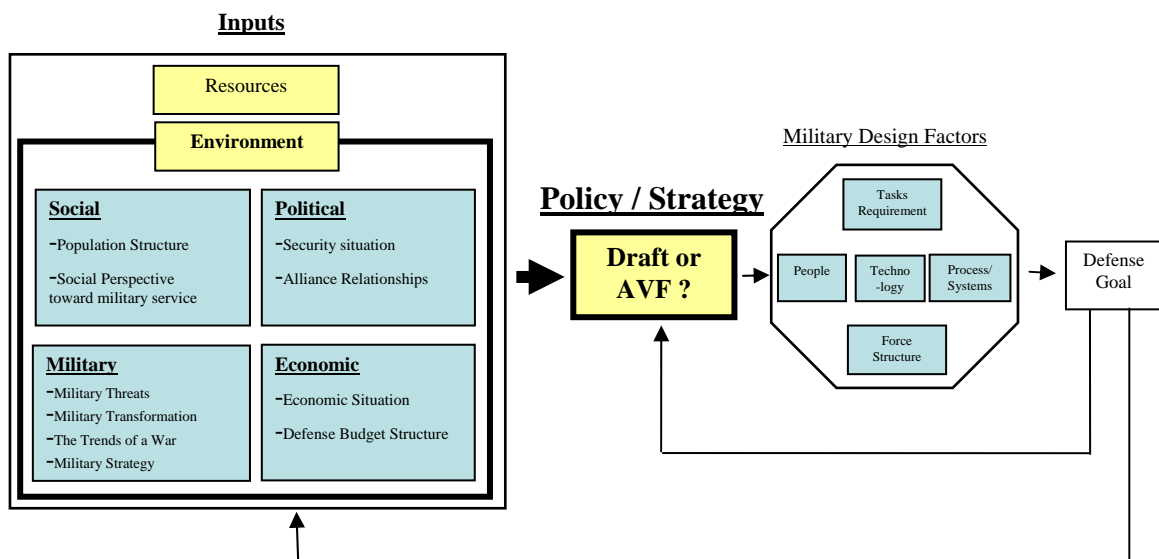
<sup>46</sup> Chung Je Park, “The Direction of ROK Military Defense Reform,” *Korea Defense Review*, September 2005, p. 84.

<sup>47</sup> Young Jin Cho, “Defense Manpower Management for Technology-intensive Forces,” KIDA, 2006, p. 5.

THIS PAGE INTENTIONALLY LEFT BLANK

## V. ANALYSIS OF THE ROK MILITARY MANPOWER FORCE STRUCTURE FACTORS

This chapter applies previous research on the criteria for choosing a military system. These criteria consider selecting factors, the characteristics of a country that chooses a voluntary or mandatory system, and the goals to be pursued by the military systems. Although the selecting factors vary according to researchers, military/economic/political/social circumstances are the most desirable factors. Additionally important, especially, the degree of threats from the outside, economic power, population and the number of draftees. Social conditions are considered important as applicable data are analyzed in a number of ways and the characteristics of each country are taken into consideration.



Source: Nadler, David A. and Tushman, Michael, "A Congruence Model for Diagnosing Organizational Behavior" in David A. Kolb, Irwin M. Rubin and Joyce S. Osland. *The Organizational Behavior Reader*. (Englewood Cliffs, New Jersey: Prentice-Hall, 1991)

**Figure 13. Military/Economic/Political/Social Circumstances and Their Relationship with Military Design Factors**

The most influential factors for studying the ROK military system are the degree of the threat from North Korea and military spending commensurate with the country's economic power. To deter provocation from North Korea and to combat their forces, the

limited budgets for national defense shall be spent by mid- and long-term plans, so as to maintain competitive armed forces, and the military systems shall meet the demands of the society.

This chapter uses the conceptual model to explain how military/economic/political/social circumstances have influenced the Korean conscription systems and how they will also affect a decision as to what type of military service should be implemented in the future.

## **A. MILITARY FACTORS**

### **1. Military Threats**

After the inter-Korean summit in June 2006 and the Joint Declaration, North Korea has maintained a government-level dialogue with South Korea, including ministerial talks. But North Korea has remained unchanged regarding the “Military-First Policy (Songun Chonch’i).” This policy, in essence, postulates that “politics which solve all problems arising in the revolution and construction on the principle of giving priority to the military affair and advance the overall cause of socialism relying on the army as the pillar of the revolution.”<sup>48</sup>

In spite of its deepening economic difficulties, North Korea continues to strengthen its military capability. North Korea’s defense expenditures are covered by not only its national budget, but also by an independent military budget encompassing operations of the munitions industry (secondary economy), weapons exports, and foreign currency earning activities of military units. Its actual military expenditures are estimated at over 30 percent of its gross national income (GNI). Through this policy, North Korea continues to maintain its conventional and asymmetrical military capabilities.

The ROK military has identified five major threats from North Korea.<sup>49</sup> The first threat is nuclear, biological, and chemical (NBC) weapons. North Korea’s Korean Central News Agency announced that it had successfully conducted an underground

---

<sup>48</sup> “Songun Chonch’i” Global Security, Adapted from <http://www.globalsecurity.org/military/world/dprk/songun-chongchi.htm>; Internet; Accessed 7 March 2007.

<sup>49</sup> Defense White Paper, ROK MND, Seoul, 2004, p. 44.

nuclear test on October 9, 2006. There is no strong evidence indicating that North Korea possesses nuclear weapons, but it is suspected that North Korea may have produced one or two nuclear weapons with about 10 to 14kg of weapons-grade plutonium after its nuclear weapons test. It is believed that North Korea possesses approximately 2,500 to 5,000 tons of toxic agents, such as nerve, blister, blood, and vomiting agents, as well as tear gas. The North is suspected of being able to independently cultivate and produce such biological weapons as the bacteria of anthrax, smallpox, and cholera.

Mid/long-range missiles are big threats to South Korea because the Seoul metropolitan area is within the range of 170mm self-propelled artillery tubes and 240mm multiple rocket launchers deployed in the forward area. Most of these weapons have already been in fixed positions in numerous tunnels near the demilitarized zone (DMZ) and have zeroed in on their targets. They would be a major means of attack during the initial phase of the war scenario.

Special Operations Forces (SFOs) are also one of the asymmetrical military capabilities of North Korea. They could bring huge disorder of the ROK rear area by sabotaging war-support facilities and assassinating ROK leaders. North Korea maintains more than 100,000 SFO units trained for deployment into South Korea prior to and during the initial phase of a war.

Armored assets are regarded as important assets even though 70 percent of Korean Peninsula consists of mountainous terrain. It was shown in the Korean War that such assets can be very effective. North Korea maintains about 5,800 tanks, which is over two times more than South Korea has. North Korea has deployed approximately 70 percent of its ground forces south of the Pyongyang-Wonsan line. Thus, it is maintaining the ability and posture to wage a surprise attack without any redeployment in the event of an emergency.

Further, the air assets of North Korea surpass those of South Korea in quantity. There are about 1,380 fixed-wing aircraft owned by the North Korean air force, including jet fighters and support aircraft. They have the capability to support special warfare units, such as sniper brigades, infiltrating deep into the South's rear areas at low-altitudes.

To cope with North Korea's major threats, to be executed in concert with a massive concentration of ground forces in the front, South Korea has no option but to maintain a massive army. The relative change of service ratio reflects the global trend and growing importance of the navy and air force in modern and future warfare. Although the ROK military is required to shift itself from threat-based to capabilities-based planning in the future,<sup>50</sup> the military threat is a very important factor in reforming the ROK's military structure because North Korea still maintains military power superior to that of South Korea in quantitative terms. Massive armed forces would be needed to counter a military threat from North Korea, and South Korea may need to maintain a conscription system for this reason.

## **2. The Military Transformation (DRP 2020)**

As shown in Chapter I, the ROK plans to reduce military manpower from its current level of 681,000 to 500,000 by 2020. To make up for the manpower reduction, military capabilities will be increased. Given North Korea's massive military manpower, the defense ministry will undertake this reduction of the nation's military manpower in three phases. During the first phase, between 2006 and 2010, the army will be cut back by 60,000 privates, and 20,000 NCOs will be added to fill the shortage of skilled privates. In the following phase, between 2011 and 2015, an additional 60,000 troops will be cut. This will be followed by the downsizing of an additional 80,000 in the third phase, between 2016 and 2020, leaving a total of 500,000. This gradual reduction in manpower will address North Korea's challenges appropriately.<sup>51</sup>

Moreover, the defense ministry knows well that a manpower reduction will not save the money necessary for the buildup of military capabilities. Actually, in terms of manpower costs, more money will be needed to replace 60,000 privates with 20,000 NCOs. The rising costs of a qualitative force-buildup poses a dilemma, because reducing military manpower does not provide noticeable cost savings. Therefore, the defense ministry is requesting an increase in the defense budget.

---

<sup>50</sup> Beth Asch and James R. Hosek, "Looking to the Future: What Does Transformation Mean For Military Manpower and Personnel Policy?," *Occasional Paper Series RAND*, 2004, p. 4.

<sup>51</sup> "The Defense Reform Plan 2020," ROK MND, Seoul, 2005.

The DRP appears to provide a useful approach to future ROK military forces that will enhance ROK capabilities against most future security challenges. It reflects deep thinking about how to improve ROK military capabilities while focusing on the North Korean invasion threat. However, there are some security challenges against which the projected DRP forces appear to perform less well than do the current forces; a more thorough review of those challenges may be able to identify corrections at reasonable costs, along the lines discussed above, in terms of managing ROK risks.

These efforts to reform the military define the process to meet the defense goal and accommodate achieving a modern military structure. Many people are wondering whether DPR 2020 can succeed because of the budget and security concerns. But in 2020, the ROK will still remain as a typical conscript system (e.g., the type between hardcore and softcore conscription). This means that the ROK will need further steps beyond the DRP to adopt an AVF system.

### **3. The Trends of a War in the Information-Driven Era and the Revolution in Military Affairs (RMA)**

The ROK military service system should be chosen after considering the trends of a war in the information-driven era, the potential capacity for military reform of its neighboring countries, and the direction of its plans regarding military strength.

As depicted in Table 5, the trends of a war in the near future will be characterized by information/knowledge-driven victories as well as the battlefield in air and space. The military organization will be a single-layered horizontal network and the authorities/responsibilities will be assigned to lower echelons. As a result, the importance of middle echelons decreases, obscuring the distinction between commissioned officers/non-commissioned officers. Also, combat soldiers would be equipped with advanced knowledge and information. The status of a soldier without adequate knowledge and information would be likened to that of an unskilled worker in a Third-World society. Hence, armed forces relying on their size, supported by conscription-based systems, cannot be as effective in the future when victory is determined by information/knowledge.<sup>52</sup>

---

<sup>52</sup> Tae Young Kwon, "The Trends of a War in the Information-Driven Era," KIDA, 2003.

**Table 5. The Trends of a War in the Information-Driven Era**

- Information/knowledge driven victories
- The battlefield in air and space
- A single-layered horizontal network
- The authorities/responsibilities will be assigned to lower echelons
  - the importance of middle echelons decreases, obscuring the distinction between commissioned officers/non-commissioned officers
- The combat soldiers are equipped with advanced knowledge and information

Source: Kwon, Tae Young, "The Trends of a War in the Information-Driven Era," KIDA, 2003.

Table 6 shows the potential for military reform in South Korea's neighboring countries. As seen here, a focus on knowledge and information, and a Revolution in Military Affairs (RMA), suitable for each country's circumstances, are expected to be accomplished between 2020 and 2030. While the neighboring countries are putting more efforts into the new military revolution to meet the demands of an information-driven era, if South Korea sticks to its current forces, established during the industrialization era, the status of South Korea will shrink all the more, as its present national/military power is already inferior to that of its neighbors. Therefore, it cannot be avoided that Korea should pursue "a-few-good-men" systems through RMA and introduce cutting-edge military technology in the mid- and long-term plans to cope with the future combat environment. To that end, the operation of human resources should focus on quality rather than quantity, requiring the review of a volunteers-driven conscription system or a completely voluntary system.

**Table 6. The Potential for Military Reform in South Korea’s Neighboring Countries.**

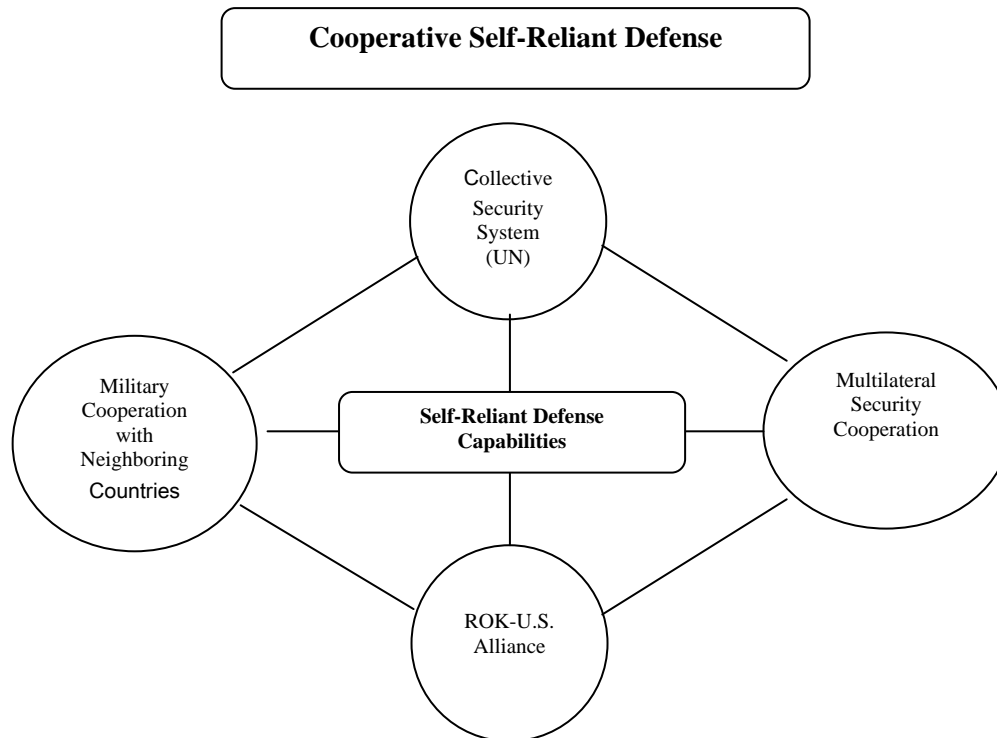
	<b>The Potential Capability</b>
<b>Russia (2020)</b>	<ul style="list-style-type: none"> <li>• New Military Doctrine               <ul style="list-style-type: none"> <li>- Advanced prevention as well as reduction and neutralization of military threats against the Russian Federation</li> </ul> </li> <li>• Offensive Defense Strategies</li> </ul>
<b>Japan (2025)</b>	<ul style="list-style-type: none"> <li>• No. 1 Navy Power in Asia</li> <li>• National Defense Program Outline               <ul style="list-style-type: none"> <li>- Multi-Functional Flexible Defense Capability Initiative</li> </ul> </li> <li>• Total Security Strategy</li> </ul>
<b>China (2030)</b>	<ul style="list-style-type: none"> <li>• Defensive Defense Policies</li> <li>• Strategy to Prevail in Local War with Advanced Technology</li> <li>• The principle of “One China”</li> </ul>

Source: An, Seok-Ki, Jeong, Joo-Seong, Jeong, Won-Young, “New Environmental Change and Development of Military Service”, KIDA, 2003, p. 26.

In view of these conditions, South Korea may need to maintain a conscription system for a while. In the long run, nevertheless, gradual changes should be made to enable a quality-focused operation of human resources in line with the trends of future combat and the military revolution.

#### **4. The Cooperative Self-Reliant Defense**

The fundamental concept of the cooperative self-reliant defense is that the ROK should retain the ability and mechanism to take responsibility for deterring any potential provocation by North Korea and repelling any actual provocation, while further developing the ROK-U.S. alliance, as well as pursuing external security cooperation through military cooperation with neighboring countries and a collective security system, as shown in Figure 14.



Source: Defense White Paper, ROK MND, Seoul, 2004, p. 94.

**Figure 14. Concept of Cooperative Self-Reliant Defense**

Former President Park Chung-hee once stated that South Korea should build up its defense capability to the level that it can defend itself against North Korea’s aggression with its own military forces.<sup>53</sup> In addition, the ROK should also leverage its military alliance with the United States to counter attacks from a North Korean force allied with China and Russia. This concept of a “cooperative self-reliant defense” allows ROK greater flexibility in its military force size and structure while ensuring that it can defend itself against North Korea’s self-initiated attack.

Cooperative self-reliant defense is a recent concept pursued by the South Korean government. It has been further expanded in the publication, *Peaceful Prosperity and National Security*, issued by the National Security Council in Seoul in March 2004.<sup>54</sup> Four policy suggestions form the core: peaceful prosperity, balanced and practical diplomacy, cooperative self-reliant defense, and comprehensive security. Although the

<sup>53</sup> Hoon Noh, “South Korea’s ‘Cooperative Self-reliant Defense’: Goals and Direction,” KIDA, 2005, p. 5.

<sup>54</sup> Ibid.

lexicon definition of self-reliant defense is to protect one's own territory from the enemy by using one's own forces, South Korea has, so far, emphasized security cooperation with other states as a necessary means of achieving "self-reliant" defense. In other words, the ROK will leverage its military alliances to defend the Korean Peninsula even as it remains the primary actor responsible for its own security, unhindered by outside influence.

However, according to U.S. military transformation in Korea, the first step the ROK should take is to reach an agreement on the level of cooperation and then improve the self-reliant capability, through which the nation can cope with any possible challenges that it might confront in the future. Cooperative self-reliant defense aims to minimize any instability in defense posture against North Korea and discord with the United States and to build up defense capabilities that are less-affected by the changing security environment.<sup>55</sup> The ROK needs to bolster the readiness of its combat forces, develop the capability to counter North Korea's WMD threats, enhance management capability, create a firm foundation for developing the ROK's own military technology, adjust military structure, and develop operating systems to build an advanced, elite, defense force.

The cooperative self-reliant defense is fundamental and is a good way of deterring neighboring countries. At present, the structure of manpower in the military should aim at independent national defense. In line with this goal, a sharp reduction in the number of soldiers or a drastic shift to a voluntary system would not be practical; a gradual approach is essential.

## **5. Technological Capability**

Technology in the military is another factor in the ROK military manpower force structure. Technology can help downsize the traditional ROK military by introducing new command-and-control capacities and high-tech weapons systems. Research and development (R&D) on military technology and the acquisition of war materials are the

---

<sup>55</sup> Defense White Paper, ROK MND, Seoul, 2004, p. 95.

foundations for force improvement, as well as tools to generate creative ideas for national defense. The development of domestic military technology could thus be a cornerstone for realizing a self-reliant defense.

In fact, the ROK army has been reliant on the supply of core technologies and imported finished goods from abroad, failing to support the ROK civilian defense industry in developing military technology. This is because the ROK priority lies in early militarization to defend against intermittent threats from North Korea. Although the global military industry has improved cutting-edge military technology, the ROK has focused on efforts to build superiority over North Korea in terms of military capability. This has resulted in a wide gap between military technology and highly-improved technology in general, insufficient investment in domestic R&D, and heavy dependence on foreign technology. All these problems should be resolved through investment in improving military technology but, at the same time, the ROK should consider restructuring of the military for greater efficiency in a practical sense.

South Korea also has developed independent military technology through the Agency for Defense Development (ADD) and has put efforts into the introduction of a technology-driven army. For example, the new, self-propelled artillery system (K-9) has reduced the number of soldiers needed to operate the weapon through an automatic electronics system and has enhanced its accuracy, thus increasing combat effectiveness. Such trends can reduce the number of soldiers required and improve military service systems.

## **B. ECONOMIC FACTORS**

### **1. The Effect of Economic Situation of South Korea**

Despite the strong value of South Korea's won in the foreign currency exchange market and high oil prices, its economy is expected to grow around 5 percent in 2006, potentially surpassing a growth rate of 4.8 percent for the first time since 2002. Robust growth in 2006 resulted from an increase in domestic consumption and investment and better-than-expected export performance.

Sluggish job growth is primarily due to the economy's slow recovery. Despite a fairly robust economic recovery, job creation has lagged in 2006. Around 300,000 new jobs are estimated to have been created in 2006, far short of the government's target of 400,000. According to current statistics, 295,000 new jobs were created on average per month from January to November of 2006.<sup>56</sup>

Military recruiting is affected by the economic situation and government policy for creating jobs. Recently, the government has begun to put top priority on creating jobs. A number of governmental bodies have scrambled to come up with plans to create more jobs. However, the chances for success seem low, since most of the policies lack consistency. In addition, the policies focus only on "job creation" itself rather than on a fundamental approach that would create greater demand for labor. The unemployment problem is not confined to the ROK. Job creation has become the biggest agenda item of governments in many major countries. Nevertheless, it does not appear that all these countries have been entirely successful in actually creating jobs.<sup>57</sup>

Job creation is made more difficult as companies strive to maximize production, using a minimal workforce, to survive recessionary trends and fierce competition. Companies are also increasingly selling off unprofitable businesses, shifting into higher value-added ones, and pushing for automation and outsourcing. Aside from downsizing or streamlining, Korean firms are increasingly reluctant to hire new workers, given the overly burdensome increase in mandatory social insurance and unstable labor relations.

High rates of unemployment can have a positive effect on recruiting soldiers. In particular, the number of applicants for commissioned/noncommissioned officers increased after the International Monetary Fund (IMF) crisis in 1997, enhancing the overall level of qualification for the job. But this phenomenon might have happened temporarily, according to the economic situation at that time, so we cannot say that it is good for introducing a voluntary system.

Nevertheless, in terms of economic power, Korea is ranked 10th in the world; its gross national product (GNP) per capita is only \$13,000, far short of \$20,000 that is

---

<sup>56</sup> Samsung Economic Research Institute, "Korea Economic Trends," Vol. 12, No.1, 2007, p. 14.

<sup>57</sup> *Ibid.*, p. 15.

required for introducing a voluntary system.<sup>58</sup> But absolute economic superiority over the North and a rise in military spending due to an increasing GNP would facilitate the introduction of a voluntary system.

## 2. Defense Budget Structure

The military defense budget can be divided into two major parts: force investments program (FIP) and ordinary operational costs (OOC), as shown in Table 7. Force investments aim “to secure capabilities to tackle existing threats first and subsequently to brace for unspecified future threats, while strengthening domestic R&D capabilities at the same time.”<sup>59</sup> Ordinary operational costs focus primarily on improving soldiers’ morale and welfare, digitizing national defense systems, consolidating education and training, meeting the requirements to preserve the exiting combat force, and enhancing public confidence.<sup>60</sup> Table 7 illustrates the amount and functional allocation of the general account of the defense budget.

**Table 7. The ROK Nominal Defense Budget, FY 2004 – FY 2005**

Unit :trillion Won

Classification	FY2004		FY2005		Increase	
	Value	%	Value	%	Value	%
<b>Total Expenditure</b>	18.9412	100 %	20.8226	100 %	1.8814	9.9 %
<b>FIP costs</b>	6.2930	33.2 %	7.0656	33.9 %	0.7726	12.3 %
<b>OOC</b>	12.6492	66.8 %	13.7570	66.1 %	1.1088	8.8 %

Source: Defense White Paper, ROK MND, Seoul, 2004, p. 212.

The force investment budget is used to develop key defense capabilities for self-reliant defense. In particular, there is an urgent need to improve deterrent capabilities in the areas of surveillance and precision attacks. Another major priority is the development

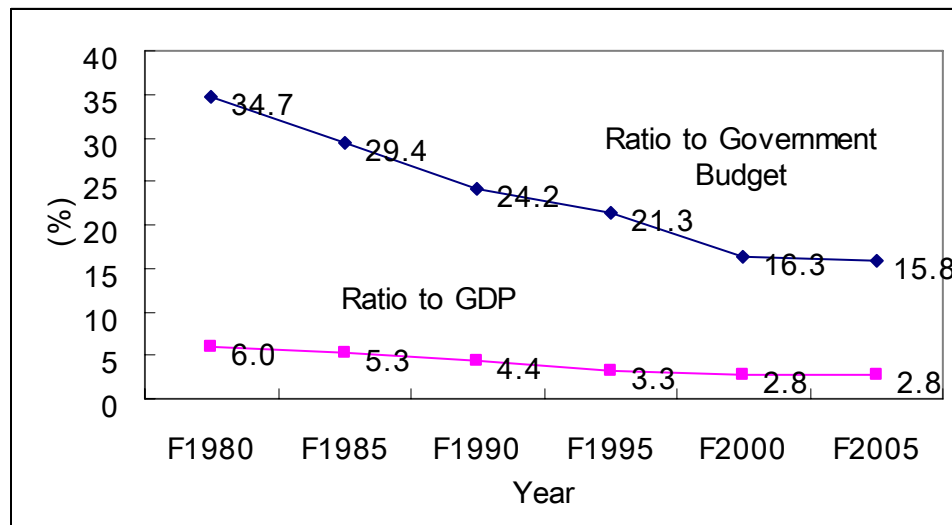
<sup>58</sup> Korea National Statistical Office (KMSO), Available from <http://www.nso.go.kr/>; Internet; Accessed 19 March 2007.

<sup>59</sup> Defense White Paper , ROK MND, Seoul, 2004, p. 210.

<sup>60</sup> Ibid., p. 211.

of ROK's military technology to domestically produce weapons systems. South Korea also intends to modernize its current armed forces to optimize their deployment and ensure battle-readiness, which requires substantial and timely funding for supplies as well as maintenance of weapons and equipment.<sup>61</sup>

The increased expenditure on operations and maintenance (O&M) reflect concerns over the morale and welfare of the soldiers. The improvement of living conditions in the barracks and wages are top priorities. Other crucial concerns in the formulation of the defense budget include intelligence and defense technology to prepare for future warfare, education and training programs for soldiers to boost battle-readiness, and public benefits in terms of resolving soil and air pollution near shooting ranges.<sup>62</sup>



Source: Defense White Paper , ROK MND, Seoul, 2004, p. 215.

**Figure 15. Defense in Government Budgets and GDP**

The nominal amount of the ROK defense expenditure has grown, as shown in Table 7. But the real ratio of the defense budgets, as displayed in Figure 15, have been declining due to some factors such as market prices, increased salaries in line with the growing national income, and the high cost of advanced weapons systems. This ratio

<sup>61</sup> Ju Hyun Park, "Midium-Term Expenditure Framework and Year 2005 Defense Budget," KIDA, 2005, p. 6.

<sup>62</sup> Ibid.

dropped to 2.8 percent in 2000 from approximately 6 percent in the early 1980s. As a result, the ROK military has not had the flexibility to foster a cooperative self-reliant national defense.

To steadily build up a self-reliant defense force, the MND will work closely with other government agencies to raise the defense expenditure in stages taking into account national economic conditions. The MND aims to appropriate 3.2 percent of the gross domestic product (GDP) for national defense by 2008. This translates into an annual increase in the defense budget of approximately 11 percent.<sup>63</sup>

An increase in the defense budget is required to build a technology-centered force for South Korea. Two years have passed since the South Korean government declared its intention to build self-reliant defense capabilities. South Korea needs to allocate sufficient resources to do so even as it focuses on new defense concepts, reform, and detailed projects. Although the FY 2005 and mid-term defense budgets reflected the government's intention to pursue a self-reliant defense, they were inadequate. It is anticipated that South Korea will enjoy a 5 percent real growth rate in the future or an 8 percent nominal growth rate taking into account inflation. This falls short of the required 9-10 percent annual increase in the defense budget. Intensified efforts and a national consensus will need to be forged to ensure that the appropriate defense budget is allocated.<sup>64</sup>

The ROK military is sustained by the defense budgets appropriated by the congress. But even if the ROK MND gain approval of next fiscal year's defense budget from the President, the congress sometimes cuts the defense budget. The ROK government has recently adopted a new method to pre-allocate resources and announced the Medium-Term Expenditure Framework (MTEF) for the FY 2004-2008 budget.<sup>65</sup> The Ministry of Budget and Planning begins to allocate the budget in a lump sum at the earliest stage to help each ministry strategically allocate its budget to meet its own needs and have more authority. Thus, it is timely and necessary for the MND to implement a

---

<sup>63</sup> Ju Hyun Park, "Midium-Term Expenditure Framework and Year 2005 Defense Budget," KIDA, 2005, p. 8.

<sup>64</sup> Ibid., p. 9.

<sup>65</sup> Ibid., p. 3.

new defense budget model that adjusts to the changes in the overall government budget. For this purpose, a mid-term defense budget should be drawn up through planning and programming of the Planning Programming & Budgeting System (PPBS), which might be a significant step toward target-oriented (rather than habitual and incremental) budgeting.

Due to the high spending in manpower management, modernization of military equipment is being addressed by mid- and long-term plans. Given that additional spending is needed, because of reduced military service terms as well as increased budgets due to a larger number of noncommissioned officers in 2006, reduction in service terms and conversion to a voluntary system are not likely for some time; and, thus, a stable increase of military budgets would be guaranteed first.

## **C. POLITICAL FACTORS**

### **1. Security Situation in Northeast Asia**

The global security environment is constantly changing as it is affected by many uncertain factors, including the economy, technology, the climate, and so on. This necessitates a change from a military-centered security framework toward a broad security paradigm. As such, military reform will be geared toward building a qualitatively strong and bold army, moving away from a quantitatively large army that derives its strength merely on the number of personnel.

Geographically, only the ROK's four immediate neighbors (Japan, China, Russia and North Korea) and their allies can carry out an invasion. However, it is unlikely for some of them to do so. For example, Japan does not have a force anywhere close to what would be required size to launch an attack, and Russia has an even smaller force deployed within a thousand kilometers of Korea.

In general, there is increasing economic cooperation and interdependence among Northeast Asian countries given tension alleviation and promotion of cooperation around the world after the Cold War. Nevertheless, there are several sources of potential regional friction, such as the North Korean nuclear issue, cross-strait relations, and

possible territorial disputes over some islands and territories. Furthermore, several of the countries that have marshaled the world's largest military forces, such as China, are constantly trying to expand their influence in the region.<sup>66</sup>

The U.S. acts as a “balancer” in Northeast Asia through its ROK-U.S. and U.S.-Japan alliances. Presently, the U.S. is actively trying to deter nuclear development by North Korea and has pressed on North Korea to participate in the Six-Party Talks. U.S. government policies affecting the size and role of U.S. troops in Korea have a tremendous impact on the security of the Korean Peninsula.<sup>67</sup>

China also acts as a balancer in the region, given its diplomatic ties with both Koreas. For example, China plays a key role in the Six-Party Talks, although the primary players are the US and North Korea. China supports the denuclearization of the Korean Peninsula as it seeks a peaceful Northeast Asia to achieve its national goal of “modernizing the country through economic development”<sup>68</sup>

Although the scope of its Self-Defense Force is limited, Japan incurred the world's third largest defense expenditure in 2006 after the U.S. and Russia, due in part to its close military alliance with the U.S.<sup>69</sup> Japan has tried to expand its military influence and is promoting proactive security dialogues/exchanges with regional countries. Potential disputes between Korea and Japan remain, as evidenced by Japan's distortion of its wartime history, Dokdo island, and visits to the Yasukuni shrine by Japanese leaders. The co-operation of both countries is required for the establishment of a long-lasting partnership.

Russia, for its part, is trying to restore its influence on the Korean Peninsula and expand its role in Northeast Asia. Russia is playing an active role in helping to resolve the North Korean nuclear impasse and has strong interests in linking the Trans-Siberian Railway (TSR) with the Trans-Korea Railway (TKR) for its gas pipes.<sup>70</sup>

---

<sup>66</sup> Hwa Sub Song, “New Security Strategy of U.S. and the Change of Japanese Security Policy,” KIDA, 2003, p. 10.

<sup>67</sup> Defense White Paper, ROK MND, Seoul, 2004, p. 34.

<sup>68</sup> Ibid.

<sup>69</sup> Ibid., p. 35.

<sup>70</sup> Ibid.

In terms of geopolitics, world powers have had keen interests in South Korea, and the issue of the ownership of islands between Japan and China can cause a local war at any time. There has been potential for conflict with neighboring countries around Korea, and concerns over terrorism have increased in the world, posing threats to national defense for a considerable period. Moreover, the increased military spending of the neighboring countries through military reforms and potential local conflicts in the area significantly affect Korea's security. Such military powers might pose a high threat to Korea, which is a good reason to maintain conscription.

## **2. Future Development of the ROK-U.S. Military Alliance**

By entering into the "Mutual Defense Treaty between the Republic of Korea and the United States of America" on October 1, 1953, the two countries established an alliance based on mutual interests of freedom and peace. This treaty marked the beginning of an official military alliance between the two countries to jointly deal with an external armed attack with the U.S. bringing in military troops into Korea for its defense. As a legal basis for the joint defense system between the two countries, the treaty provided basic understanding for subsequent agreements regarding national security and military matters, for example, the "Status of Forces Agreement (SOFA)." The treaty is significant from political, diplomatic, as well as national security perspectives, providing the primary tool for South Korea and the U.S. to collaboratively cope with aggressive moves from the other countries.<sup>71</sup>

By repressing the potential threats toward South Korea, the treaty has contributed tremendously to peace in the Northeast Asian region for the past five decades. In the meantime, South Korea has grown strong enough to take charge in defending itself as compared to the past, when it heavily depended on the U.S. for necessary supplies and training. The military capability of South Korea was demonstrated to the world with its participation in the Gulf War in 1991 and the recent dispatch of air force as well as medical support for the anti-terrorism military operations in Afghanistan.

---

<sup>71</sup> Hwa Sub Song, "New Security Strategy of U.S. and the Change of Japanese Security Policy," KIDA, 2003, p. 103.

Since the summit meeting between Korea and the U.S in 2000, Korea has endeavored to improve its relationship with North Korea, paving the way toward reconciliation with continual exchanges. As the U.S took on new strategic tasks, including its own defense against terrorism, and realigned its national security arrangements as part of the Global Defense Posture Review (GPR),<sup>72</sup> it has restructured its military operations within Korea.

Changes in the security environment have also affected the dynamics of ROK-US relations. The recent “anti-U.S. sentiments” among the young Korean generation have reached an alarming level. Similarly, anti-Korean sentiments are observed among the U.S. senators. Such developments have been somewhat exaggerated by the media, given that the overall alliance between the two countries remains strong.

Despite strong military co-operation, a new approach for the alliance needs to be sought. That is, security efforts based on mere regional relationships are not sufficient anymore; a future-oriented collaboration needs to be developed that can effectively deal with new sets of threats that include terrorism, weapons of mass destruction, human rights, and environmental issues.<sup>73</sup> Korea should gradually increase its military power under the U.S. umbrella to cope with unstable international environments. Following the example of Germany, Korea should pursue gradual changes in its military service system. There is also a need to resolve several issues, given the restructuring of U.S. operations, such as moving of the Yongsan base and a transfer of the wartime operational command. In any case, the alliance should be maintained, for such a relationship with the U.S. is absolutely essential to sustain South Korea’s economy and security.

## **D. SOCIAL FACTORS**

### **1. Highlights of the Population Structure**

It is predicted that the population growth rate in Korea will trend toward null, due to the declining birth rate as well as the birth-limit policy introduced by the government.

---

<sup>72</sup> Du Hyeogn Cha, “The Future of the ROK-U.S. Alliance: Toward the Evolution of a Strategy Cooperation Alliance,” KIDA, 2004, p. 6.

<sup>73</sup> Ibid., p. 10.

Korean society will reflect an aging population due to the prolonged life expectancy from the improvement of the medical system as well as the declining birth rate.

According to Table 8, as of 2005, the population growth rate is 0.21 percent. The population growth rate is projected to be 0.26 percent and 0.02 percent in 2010 and 2018, respectively. Then, the population growth rate will decrease to 0.00 percent, -0.25 percent, and -1.07 percent in 2019, 2030, and 2050, respectively.<sup>74</sup>

**Table 8. Trends in the Total Population and Population Growth Rate**

(Unit: thousand persons, %)

	1970	1980	1990	2000	2005	2010	2018	2020	2030	2050
<b>Total Population</b>	32,241	38,124	42,869	47,008	48,138	48,875	49,340	49,326	48,635	42,343
<b>Population Growth Rate</b>	2.21	1.57	0.99	0.84	0.21	0.26	0.02	-0.02	-0.25	-1.07

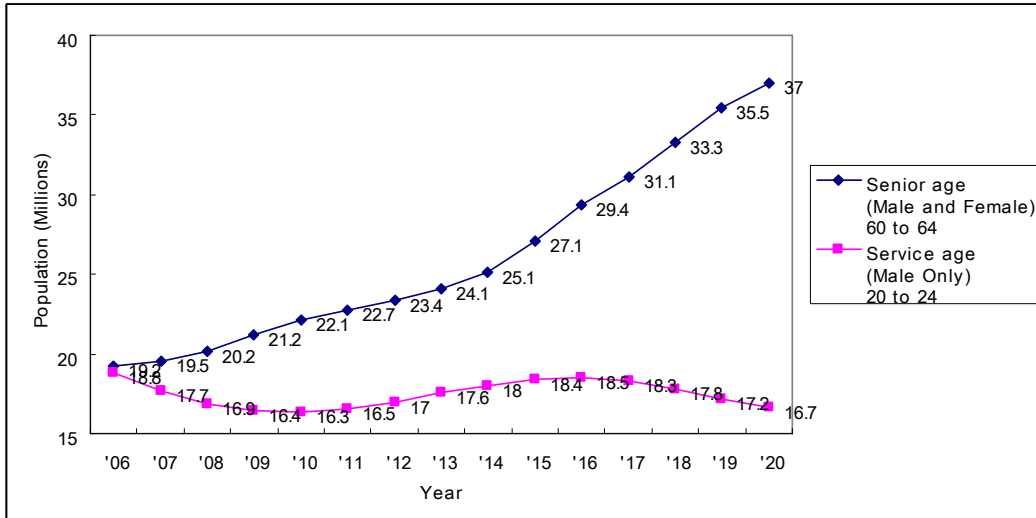
Note : Population growth rate refers to the increase over the previous year.

Source: Adapted from Korea National Statistical Office (KMSO), Available from <http://www.nso.go.kr/>; Internet; Accessed 5 March 2007.

Birth rates, which were 2.8 people per woman in 1980 and 1.6 people in 1990, are predicted to fall to 1.4 people in the future. Due to these results, the portion of the younger population will drop drastically, but the portion of the population aged 35 to 54 and 60 and over will increase, as shown in Figure 16. Korea is predicted to become an aged society by 2018.<sup>75</sup>

<sup>74</sup> Korea National Statistical Office (KMSO), Available from <http://www.nso.go.kr/>; Internet; Accessed 19 March 2007.

<sup>75</sup> Ibid.



Source: Adapted from Korea National Statistical Office (KMSO), Available from <http://www.nso.go.kr/>; Internet; Accessed 5 March 2007.

**Figure 16. Population of the Service-Age Male and the Changing Population Structure**

These trends in the population structure are a critical factor for policy regarding the military service system. The low birth rates, reduced youth population, and an aging society would call for a decrease in the number of soldiers, a reduced number of those in alternative service, and adjusting the eligibility for enlistment. The low birth rates, which mean fewer children, would be an obstacle to increasing the appeal of military service. In turn, the conversion into a voluntary system would be more difficult.

Moreover, with a standing army of 690,000, the scale is too great to introduce a voluntary system now. The soldier ratio of 1.45 percent, compared with the population, is much higher than 0.5 percent, indicating that a conscription system is still needed to meet manpower requirements.

Although the youth population is expected to decrease, a new type of military resource is likely to increase. First of all, the social participation of women has expanded, and the need for competent women in the military sector may likewise increase. Along with the structural changes in the population, national policies are promoting utilization of the female population as military officials. So, women would be given more chances in the military field.

## 2. Social Perspective toward Military Service

Table 9 shows related results from a KIDA survey (2000 and 2003) on national perceptions of military service. Perceptions of the equity in the military are relatively low, with over 56 percent of respondents indicating “unfair.” Regarding the possibility for misconduct due to system diversity, 54 percent of people answered that there is a high chance for such misconduct.

**Table 9. National Perception of Military Service**

<b>Topic</b>	<b>Results</b>
<b>Equity of the service</b>	<ul style="list-style-type: none"> <li>• fair 48.8% (very 1.5%, roughly 42.3%)</li> <li>• unfair 56.2% (very 11.4%, roughly 44.8%)</li> </ul>
<b>Possibility for misconduct due to system diversity</b>	<ul style="list-style-type: none"> <li>• yes 53.8%</li> <li>• mediocrity 32.8%</li> <li>• no 13.5%</li> </ul>
<b>Will try to avoid the service if possible</b>	<ul style="list-style-type: none"> <li>• yes 79.4%</li> <li>• mediocrity 12.2%</li> <li>• no 8.3%</li> </ul>
<b>Will report the fact when I am aware of military service misconduct</b>	<ul style="list-style-type: none"> <li>• yes 4.5%</li> <li>• mediocrity 10.2%</li> <li>• no 85.2%</li> </ul>

Source: An, Seok-Ki, Jeong, Joo-Seong, Jeong, Won-Young, “New Environmental Change and Development of Military Service”, KIDA, 2003, p. 60.

A strong majority of people (79 percent) stated that they would try to avoid military service, if possible.. Meanwhile, 85.2 percent of people claimed that they would not report misconduct if they were aware of it. Apparently, many people tend to criticize misconduct in the military; yet, they would also attempt to avoid service themselves and purposely fail to report misconduct. These are interesting double standards for people, when thinking about the military and popular perceptions of service.

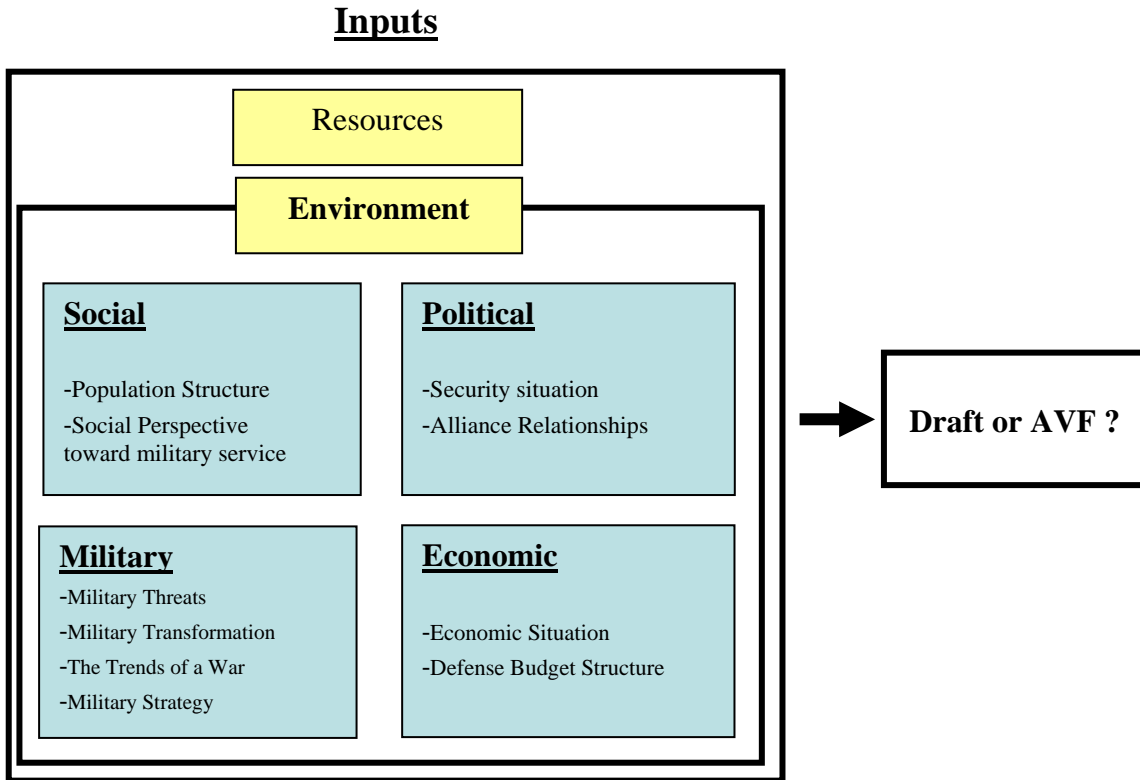
The ROK military has developed a negative image stemming from several incidents: the ongoing allegation of military exemptions for a significant number of sons of public figures; the scandal of the army general promotion board; the shooting rampage

by a corporal at the barracks in the DMZ, and the accidental crash of air force jet fighters. Public awareness of the military is quite negative due to suicides or desertions caused by beatings and assaults in the past, draft-dodging by celebrities and children of high officials, and the influence and activities of organizations that were oppressed by the military regime. Despite the efforts of the military to reduce corruption and bring transparent administration, suicide or desertion cases have a fatal influence on the image of the military. Such negative impressions of the military have resulted in calls for changes in the service system. The ROK must not overlook social factors in terms of public attitudes toward military service. This is crucial, because social support for the ROK military is based on compulsory service. The ROK military must attempt to get the full support of society, concentrating more efforts on building trust before attempting to introduce an AVF.

Social changes also affect the maintenance and recruitment of soldiers. The improved quality of life nationally may have reduced the appeal of military service to young people. There will be a constant demand for enhanced environments and welfare in the military, causing military spending to rise. Furthermore, respondents of the latest survey answered that they would not join the army, although they wanted a voluntary service system. This implies that recruitment of soldiers could be a major challenge if a voluntary system were introduced.

#### **E. ANALYSIS OF ROK MILITARY MANPOWER FORCE STRUCTURE FACTORS**

This chapter examines existing factors that influence future manpower force planning of the ROK military based on the conceptual model to determine whether the ROK military manpower force structure factors are suitable for an all-volunteer system. Various factors determine an appropriate military service system and identify details of the structure in accordance with various internal and external considerations. Figure 17 shows influential factors in selecting a type of military service from security, economic, social, and political domains to achieve the maximum national security. These factors are by no means independent; they obviously affect one another.



**Figure 17. Military/Economic/Political/Social Circumstances Used in Determining the Military Service System**

**1. Military Factors**

The military threat is a very important factor in reforming the ROK military structure, because North Korea still maintains military power superior to that of South Korea in quantitative terms. The ROK military also must include potential threats from neighboring militaries. So, maintaining draft enlistment is appropriate to induce the transition to softcore conscription from hardcore through DRP 2020 and for a cooperative and independent national defense.

**2. Economic Factors**

High rates of unemployment can have positive effects on recruiting soldiers; however this phenomenon may vary according to the economic situation, so we cannot say that it necessarily supports a voluntary system. In terms of economic power, Korea is ranked 10th in the world, but has yet to achieve the per capita income of \$20,000 needed to maintain voluntary recruitment.

The operational costs are high, as is the investment needed for defensive strength improvements. That is, draft enlistment is necessary in terms of manpower acquisition and budgets due to the current size of the army.

### **3. Political Factors**

Due to Korea's geopolitical location, there is a potential for conflicts with neighboring countries. At the same time, concerns over terrorism have increased throughout the world, posing threats to the national defense for a considerable period. Moreover, the increased military spending of the neighboring countries through military reforms significantly affect Korea's security. Such military powers might pose a high threat to Korea, which is a good reason to maintain conscription.

The ROK-U.S. alliance should also be maintained in a constructive way, meeting the needs of the times. Besides the reinforced alliance, Korea needs military aid from the U.S. to build up its military strength. The ROK should pursue gradual changes of military service systems while under the U.S. security umbrella to cope with unstable international environments.

### **4. Social Factors**

Decreasing birth rates and the changing population structure make it harder to maintain such a massive army based on draft enlistment. Further, a reduced service term, supposed to alleviate a burden on the people, will make it all the more difficult to secure the necessary manpower.

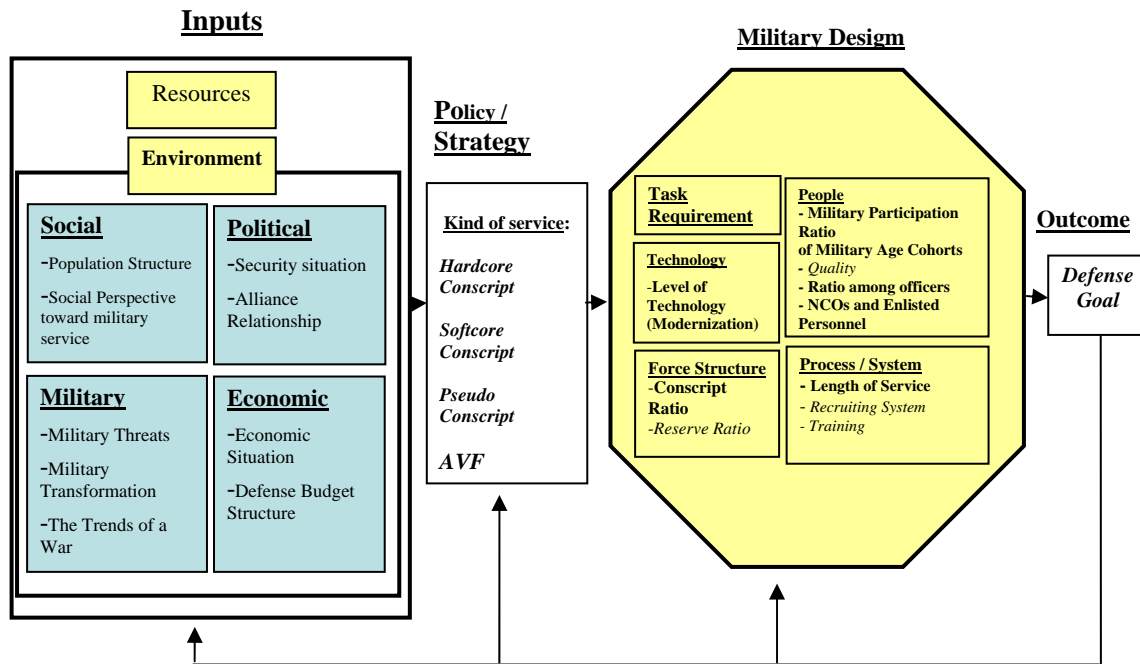
The ROK must not overlook social factors in terms of the people's perspective toward military service. This is crucial, because social support for the ROK military is based on compulsory conscription. The ROK military has had a negative image from several recent incidents. The ROK military must attempt to obtain the full support of society, concentrating greater effort on building trust before attempting to introduce an AVF.

## VI. CONCLUSION

### A. OVERVIEW FOR SERVICE SYSTEM AND SUGGESTIONS

#### 1. Decision for Service System

This study aims to evaluate the feasibility of introducing voluntary recruitment in Korea. The nation's current military system is first specified, using critical indicators for defining types of military recruitment. Then, the study examines whether the military/economic/political/social factors of Korea are suitable for voluntary recruitment using the conceptual model as shown in Figure 18.

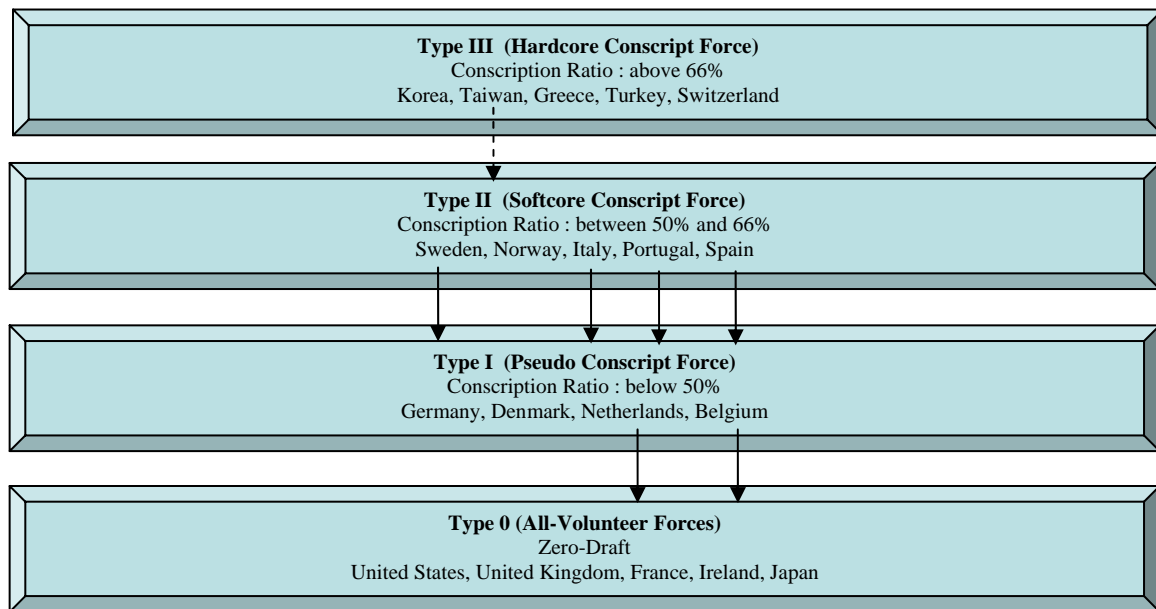


Source: Nadler, David A. and Tushman, Michael, "A Congruence Model for Diagnosing Organizational Behavior," in David A. Kolb, Irwin M. Rubin and Joyce S. Osland., *The Organizational Behavior Reader*, (Englewood Cliffs, New Jersey: Prentice-Hall, 1991).

**Figure 18. A Conceptual Model of the Defense Organization.**

According to the indices of military design factors, the Korean army operates a hardcore conscript system, indicating that Korea should first transition through softcore

conscription if it seeks to introduce volunteer-driven combined recruitment. That is, maintaining the draft for a time is unavoidable. Figure 19 shows that most European countries have adopted volunteer-driven recruitment after first introducing softcore conscription. Also, most developed countries that use all-volunteer recruitment have brought changes gradually as follows: hardcore conscription, then softcore conscription, and then volunteer-driven recruitment.



Source: Haltiner, Karl W. "The Definite End of the Mass Army in Western Europe," *Armed Forces and Society*, Vol 25, 1998, p. 18.

**Figure 19. A Typology of Force Structure and Expected Changes**

The military factors facing Korea demonstrate that the North, equipped with nuclear and chemical weapons, as well as conventional weaponry, may pose a threat to the nation for some time to come. So, maintaining the draft is appropriate to induce the transition from hardcore to softcore conscription through DRP 2020 for a cooperative and independent defense. More importantly, the future trends of warfare and the development of military technology will accelerate such a transition.

In terms of economic power, Korea has yet to achieve the per capita income of \$20,000 needed to maintain all-volunteer recruitment. In addition, the military budget

continues to decrease compared with the GNP. Operational costs are high, while investment is also needed for defensive strength improvement. That is, the draft is necessary for manpower acquisition and budgets due to the relatively large size of the army.

Because of its geopolitical location, Korea still faces a potential for conflict with neighboring countries. The possibility for increased terrorism in the world will help to define national defense needs for a considerable period. Moreover, increased military spending by neighboring countries through military reforms significantly affect Korea's security. Additionally, the ROK-U.S. alliance should be maintained in a constructive way, meeting the needs of the times. Besides the reinforced alliance, Korea requires military aid from the U.S. to build up its military strength.

Given that nearly all young people currently seek to attend college, and the public's perception of the military is quite negative, manpower acquisition is expected to be difficult. At the same time, the decreasing birth rates and a changing population structure make it harder to maintain such a massive army based on the draft. And a reduced service term, intended to alleviate a burden on the people, will make it all the more difficult to secure manpower. As a result, women's participation in the military is expected to increase, as they become more involved in social activities recently.

In summary, the draft should be maintained for the near future, but this does not necessarily mean hardcore conscription. In the long run, a gradual transition to voluntary recruitment appears necessary to develop a quality-focused approach to military resources that is in line with national defense reforms and the changing aspects of warfare. That is, the ROK should consider a phase-to-phase transition to a volunteer-driven combined recruitment system, as it prepares for the longer term prospect of all-volunteer enlistment.

## 2. Basis of the Military System under the Draft System

### *a. Adjusting the Size of the Armed Forces*

Downsizing Korea's armed forces appears critical to quality improvement in the military. To have professional manpower, investment per soldier should increase, which is hardly expected if the current size of the army is maintained. No absolute plan is offered to downsize the armed forces, because the plan should be connected with the transition of the military structure. A few previous studies suggest 500,000 soldiers as a proper target by 2015, and the latest national defense reform plans include the same number by 2020.<sup>76</sup> Along with these efforts, the composition of military manpower should be adjusted to establish a technology-driven army with even higher rates in the navy and air force as well as among the civilian defense administration.

### *b. Composition by Rank*

To establish an army with professional soldiers, the proportion of commissioned/non-commissioned officers in the army, selected through voluntary recruitment, should be increased. Though the range of such ratios can vary, the available budgets and civilian manpower, as well as the costs, should be taken into account. The national defense reform plans of the MND suggest that the ratio of officers to enlisted personnel should be 40:60 by 2020 (25:75 at present). For reference, a 40-50 percent ratio is common in developed countries such as the U.S., Britain, and Germany. To bring about this change, the scale of reduction should be determined in advance for each rank. Application of the same reduction scale to each rank would not contribute to the improved structure of military manpower. Merely eliminating enlisted personnel would not assure more effective manpower operations, although such a plan may improve the structure itself. Thus, the scale-down should be largely applied to privates, and less to commissioned and non-commissioned officers. In particular, the ratio of NCOs should be relatively higher, to increase technical staffs. A war in modern times relies heavily on the use of advanced equipment, and it is often operated by NCOs in combat.

---

<sup>76</sup> "The Defense Reform Plan 2020," ROK MND, Seoul, 2005.

*c. Composition by Service Terms*

The ratio of short-term and mandatory-service soldiers should be reduced while long-term and voluntary-service soldiers increase. In line with this goal, the positions of commissioned officers should be filled with only volunteers, phase by phase. By doing so, passive military service, as a part of mandatory service, can be avoided while the minimum service term can be lengthened. To that end, of course, a military unit requiring a smaller number of officers in the lower ranks should be promoted so that the number of officers can be reduced as well as the service term. As to privates conscripted, the number should go down steadily, while paid volunteers may be able to work longer in the army through a contract as an effort to secure experienced soldiers.

*d. Composition by Divisions/Skills*

Emphasis should be placed on technology-equipped forces. Compared with combat soldiers, more experts are required in information, telecommunications, and computers. Regarding military officers, the ratio of those with advanced technical skills should increase while civilian manpower with special skills can be utilized if the proper system were provided. When privates are assigned to military units, their major and skills should be taken fully into account. Meanwhile, a war in the future would be more complex, so that an integrated system would be more fitting rather than the currently fractionized units and skill utilization systems.

*e. Effective Use of the Female Population*

To make better use of the female population, the proportion of women in the army should be raised. This plan should be pursued positively, with any special qualities of a female taken into account for effective operation through improved service systems and working environments. The utilization of the female population is one of the major issues in the military sector. In view of changing social environments and military operations, it would be advantageous to increase participation by women.

In terms of changing trends in warfare and manpower acquisition, the potential for utilizing female soldiers is increasing as dependency on physical strength

declines and modern warfare evolves with technological advancement. Cutting-edge equipment and information systems will play an increasingly larger role, and various non-combat military functions such as peace-keeping and operations other than war open increasingly more opportunities for service by women.

Also, the future status of military manpower acquisition substantiates the need for utilizing the female population. The drastic decrease in birth rates leads to a generally smaller number of available youths, and an extended voluntary enlistment system in the future would accelerate this trend all the more. Therefore, the demand for competent female soldiers would increase.

## **B. CONCLUSION**

To maintain a technology-driven army, the ROK military service system needs to be properly facilitated. It is recommended that the size of the army be reduced, alleviating a burden on the people, and a reliance on professionals be expanded through voluntary enlistment. Nevertheless, when an army of 500,000 is maintained, the transition to a voluntary system from draft enlistment may be difficult in terms of available budgets and manpower acquisition. Without changing the framework of the mandatory system, therefore, the ratio of conscripts should be reduced while that of volunteers be increased, providing opportunities to select various ways of performing military duties. This means that the army would need to transition from draftee-driven combined recruitment to a volunteer-driven system.

In addition, the service term of conscripts should be reduced by phases, while the proportion of non-commissioned officers is increased to secure experienced soldiers. A partial volunteer system can also be applied to privates. Besides, the military service system needs to be focused on developing more professionals. In general, mid-/long-term and a voluntary system should be given the priority rather than a short-term and mandatory system, especially as service-by-contract can add flexibility to manpower operations. This means that commissioned/non-commissioned officers be hired mainly through a voluntary system, but with a longer service term through a contract. In particular, complete voluntary recruitment needs to be applied to commissioned officers in phases so that only professional soldiers with a contract can fill the position.

In promoting the downsizing of the army, it is important to establish the target manpower objectives and to formulate systematic reduction plans. In this process, an agreement on the goal and methods can be formulated carefully both inside and outside of the army, to prevent unease and unrest within the organization. It is also important to develop programs to downsize the army systematically, according to manpower types such as ranks and service terms. With these changes, the ROK military can successfully meet the defense needs of the future as it has done so well before. Through the implement the reform consistently, the ROK military will have more flexible manpower structure and enhance its capabilities against most future manpower challenges.

THIS PAGE INTENTIONALLY LEFT BLANK

## LIST OF REFERENCES

- An, Seok-Ki, Jeong, Joo-Seong, Jeong, Won-Young, New Environmental Change and Development of Military Service, KIDA, 2003.
- Anderson, Martin, The Military Draft, *Hoover Institution Press*, 1982.
- Asch, Beth J. and Hosek, James R., Looking to the Future: What Does Transformation Mean For Military Manpower and Personnel Policy?, RAND, 2004.
- Bachman, Jerald G., Blair, John D. and Segal, David R., The All-Volunteer Force : A Study of Ideology in the Military, *The University of Michigan Press*, 1977.
- Barron, John M. and Berger, Mark C., “On-the-Job Training,” W.E. Upjohn Institute for Employment Research, 1997.
- Bennett, Bruce W., A Brief Analysis of the Republic of Korea’s Defense Reform Plan, RAND, 2006.
- Bowman, William and Little, Roger, eds., The All-Volunteer Force after a Decade, Washington, D.C., *Pergamon-Brassey's*, 1986.
- Cha, Du Hyeogn, “The Future of the ROK-U.S. Alliance: Toward the Evolution of a Strategy Cooperation Alliance,” KIDA, 2004.
- Cheong, Joo Seong, “Vision of Military Manpower Affairs and Policy”, KIDA, 2000.
- China’s National Defense in 2004, *Information Office of the State Council of the People's Republic of China*, Beijing, 2004.
- Cho, Kwan Ho, Direction of Manpower Structure Development for a Successful Defense Reform, *Weekly Defense Journal*, January 2006.
- Cho, Young Jin, Cho, Kwan Ho, Chung, Kil Ho, Chung, Ju Sung, Lee, Won Bae and Kim, Ahn Sik, Defense Manpower Development Plan for an Elite Force, KIDA, 2005.
- Cho, Young Jin, Defense Manpower Management for Technology-Intensive Forces, KIDA, 2006.
- Cohen, Eliot A., Citizens and Soldiers – the dilemmas of military service, Cornell University Press, 1985.
- Cooper, Richard V. L., Military Manpower and the All-Volunteer Force, RAND, September 1977.
- Eitelberg, Mark J. and Mehay, Stephen L., eds., Marching toward the 21<sup>st</sup> Century: Military Manpower and Recruiting, Westport, CT: Greenwood Press, 1994.

Forrest, Alan, Conscription as Ideology: Revolutionary France and the Nation in Arms in The Comparative Study of Conscription in the Armed Forces, ed. Lars Mjoset and Stephen Van Holde, Oxford, *Elsevier Science, Ltd*, 2002).

Fredland, J. Eric, Gilroy, Curtis, Little, Roger D., Sellman, W. S. and eds., Professionals on the Front Line Two Decades of the All-Volunteer Force, Washington, D.C., *Brassey's*, 1996.

Fullinwider, Robert K., Conscripts and Volunteers, Rowman&Allanheld, 1993.

Gelhausen, Volker, The effects of economic, military, political, and social factors on the successful implementatoin of an all-volunteer armed force, *Naval Postgraduate School*, 1998.

Gilroy, Curtis L., Bicksler, Barbara A., and Warner, John T., The All-Volunteer Force: Thirty Years of Service, Washington, D.C., *Potomac Books*, 2004.

Global Security, Adapted from <http://www.globalsecurity.org/military>; Internet; Accessed 8 March 2007.

Haeckel, Erwin, Military Manpower and Political Purpose, London, United Kingdom, *The International Institute for Strategy Studies*, 1970.

Haltiner, Karl W., The Definite End of the Mass Army in Western Europe?, *Armed Forces and Society*; Vol. 25, No. 1, Fall 1998.

Human Rights Watch, "Conscription Through Detention in Russia's Armed Forces," *Human Rights Watch Publication*, Vol. 14, No. 8, 2002.

Interrante, Charles M., Drafting a New Consensus on Conscription, *The Fletcher School*, September 2004.

Jermalavicius, Tomas, Conscription Debate in Lithuania : How to Approach the Issue?, *Baltic Defense Review* No.8 ,Vol. 2, 2002.

Katz, Daniel and Kahn, Robert L., Organizations and the System Concept, *The Social Psychology of Organizations*, 1966.

Kelleher, Catherine McArdle, Mass Armies in the 1970s : The Debate in Western Europe, *Armed Forces and Society*; Vol. 5, No. 1, November 1978.

Keller, Katarina, Poutvaara, Panu and Wagener, Andreas, Military Draft and Economic Growth in OECD Countries, IZA DP No. 2022, March 2006.

Kim, Doo Sung, Military Manpower Affairs, Seoul, Cheilsa, 2002.

Korea National Statistical Office (KMSO), Adapted form <http://www.nso.go.kr/>; Internet; Accessed 19 March 2007.

- Kwon, Tae Young, "The Trends of a War in the Information-Driven Era," KIDA, 2003.
- Moskos, Charles C., The Military, *Annual Review of Sociology*, Vol. 2, 1976.
- Moskos, Charles C. and Frank R. Wood, The Military: More than Just a Job, McLean, VA: *Pergamon-Brassey's International Defense Publisher*, 1986.
- Nadler, David A. and Tushman, Michael, A Congruence Model for Diagnosing Organizational Behavior in David A. Kolb, Irwin M. Rubin and Joyce S. Osland. *The Organizational Behavior Reader* (Englewood Cliffs, New Jersey: Prentice-Hall, 1991).
- Noh, Hoon, South Korea's "Cooperative Self-reliant Defense": Goals and Direction, The KIDA Paper, No. 10, April 2005.
- Oi, Walter Y., The Economic Cost of the Draft, in Anderson, Martin with Barbara, Honegger, The Military Draft, Hoover Press Publication.
- Park, Chung Je, The Direction of ROK Military Defense Reform, *Korea Defense Review*, September 2005.
- Park, Ju Hyun, Midium-Term Expenditure Framework and Yeay 2005 Defense Budget, the KIDA paper No. 9, March 2005.
- Rostker, Bernard D., I Want You! The Evolution of the All-Volunteer Force, Santa Monica, CA: RAND, 2006.
- Samsung Economic Research Institute, Korea Economic Trends, Vol. 12, No. 1, January 2007.
- Scott, Richard, Organizations: Rational, Natural, and Open systems, Fifth Edition, 2002.
- Song, Hwa Sub, "New Security Strategy of U.S. and the Change of Japanese Security Policy ," KIDA, 2003.
- The Republic of Korea Ministry of National Defense, Defense White Paper, Seoul, The MND, 2004.
- The Republic of Korea Ministry of National Defense, The Defense Reform Plan 2020, Seoul, The MND, 2005.
- Tiershy, Ronald, French Military Reforms and Strategy, *Institute for National Strategic Studies and the National Defense University*, 1996.
- U.S General Accounting Office, Manpower Effectiveness of the All-Volunteer Force, Washington, DC, General Accounting Office, May 1988.

Warner, John T., and Beth J. Asch, The Economics of Military Manpower, in: Keith Hartley and Todd Sandler (eds.), *Handbook of Defense Economics*, Vol. 1, 1995.

Warner, John T. and Asch, Beth J., The Record and Prospects of the All-Volunteer Military in the United States, *Journal of Economic Perspectives*, Vol. 15, No. 2, 2001.

## INITIAL DISTRIBUTION LIST

1. Defense Technical Information Center  
Ft. Belvoir, Virginia
2. Dudley Knox Library  
Naval Postgraduate School  
Monterey, California
3. Professor Mark J. Eitelberg  
Naval Postgraduate School  
Monterey, California
4. Dr. Kwan Ho Cho  
Korea Institute of Defense Analyses (KIDA)  
Seoul, Korea
5. Academic Associate Manpower Systems Analysis  
Naval Postgraduate School  
Monterey, California
6. Army Headquater Library  
ROK Army  
Seoul, Korea
7. Woo Dang Library  
Korea Military Academy (KMA)  
Seoul, Korea