



Policy Concerns of Low Fertility for Military Planning in South Korea

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I S S U E S

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SUMMARY The South Korean military currently is the sixth-largest in the world. But years of low birth rates have resulted in declining numbers of young men available for military service, and the country now faces the pressing question of how to ensure national security in the face of inevitable troop reductions. Some options for offsetting this shrinking recruit pool (such as increasing fertility, increasing immigration, and increasing the number of women in the military) might seem obvious, but the complex economic, social, and cultural reality of South Korea make them unlikely to be embraced. The best focus for immediate action is to stabilize or increase service terms and to encourage development and implementation of high-tech security systems. While the recruits pool appears nearly adequate at present, South Korea must act quickly to develop the leaner, more diverse, and more technologically based military necessary for the country to maintain a viable military force.

South Korea is a heavily militarized nation—the only countries with larger forces are China, the US, India, Russia, and North Korea

South Korea's low fertility rate is a prominent issue and widely discussed among scholars and policy-makers. The looming economic challenges posed by unprecedented low birth rates in much of Asia are already being explored. But in light of the persistent and palpable security risks on the Korean Peninsula, another aspect of this issue is of increasing concern: How can South Korea ensure national security with so few young people to fill the ranks of its massive military? Troop levels cannot possibly be sustained given South Korea's rapidly declining population.

South Korea (Republic of Korea) is a heavily militarized nation, with the sixth-largest armed forces in the world. The only countries with larger forces are China, the United States, India, Russia, and North Korea. Given the historical disagreements and recent developments in the Yellow Sea, it is unlikely that there will be a major scaling back of military presence in either North or South Korea.¹

Concurrently, South Korea is one of the countries with the lowest fertility rates in the world. South Korea's fertility rate has been below replacement level since 1983 and has experienced further decline to the total fertility rate (TFR) of 1.2 first recorded in 2002. Despite this sustained low fertility rate, scholars and policymakers have not adequately considered whether declining numbers of young men will pose a security risk for South Korea in the coming

years, and what measures they might take to contend with the problem.

Options for the Military to Ameliorate Low Fertility

Five possible options for avoiding the dearth of potential conscripts are: (1) to decrease the size of active military and introduce high-tech security systems; (2) to increase (or not shorten) service time; (3) to increase fertility; (4) to increase immigration; and (5) to increase the number of women serving in the military. The first two options hold the most hope, while the last three options will be difficult for South Korea to achieve.

Decrease size of active military? The first option of decreasing the size of the armed forces would be a practical measure for dealing with the imploding population, though potentially risky if not balanced with technological advances in the military. South Korean government officials and military officers, keenly aware of the declining number of potential recruits, have put into place reductions of army troops from 522,000 to 387,000 by 2020. Navy and air force branches are expected to maintain their current size for the time being at 68,000 and 65,000 troops, respectively.

Relation of active military to total population for the six largest armed forces in the world, 2008

Country	Size of active military	Rank of size of active military in the world	Population	Rank of population in the world	Percentage of population in active military
China	2,255,000	1	1,330,044,605	1	0.17
United States	1,385,122	2	304,059,724	3	0.46
India	1,325,000	3	1,140,566,211	2	0.12
Russia	1,245,000	4	140,702,094	9	0.88
North Korea	1,170,000	5	22,565,347	49	5.18
South Korea	687,000	6	48,379,392	25	1.42

Sources: Central Intelligence Agency, "The World Factbook," <https://www.cia.gov/library/publications/the-world-factbook/>; Globalfirepower, "Active Military Manpower," <http://www.globalfirepower.com/active-military-manpower.asp>; US Census Bureau, <http://www.census.gov/population/international/data/idb>.

By 2050, only the most optimistic projections show South Korea coming close to producing the supply of needed men

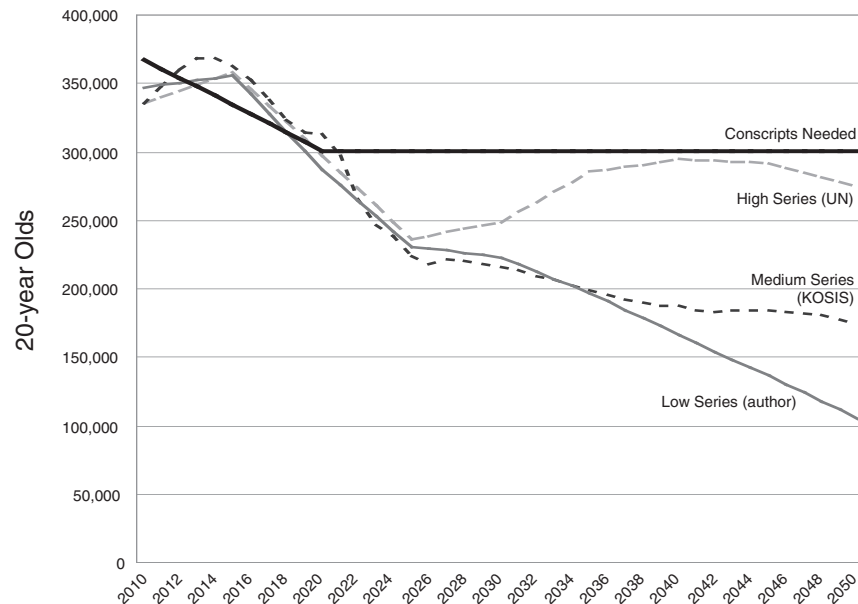
Migration and mortality rates for 20-year-olds in South Korea are negligible, so fertility is responsible for virtually the entire decline of potential recruits. In 2013–2014, there are projected to be approximately 367,000–368,000 20-year-old men in South Korea, the largest number in the period under review. Between now and 2013, there will be slightly insufficient

numbers of 20-year-olds to maintain troop size, but from 2013–2020, the pool of conscripts should be adequate as projections of the number of 20-year-olds is higher than the required number of recruits. Starting in 2020, however, the situation will become more problematic, and by 2050, if troop size is kept constant, only the most optimistic of the projection

Number of projected South Korean males aged 20 and expected needed conscripts: 2010–2050

To determine how many young men will be available to serve in the South Korean military, this analysis utilizes three population projection series. These three projection series (high, middle, and low) provide a range of fertility levels that are plausible for the country and illustrate possible population scenarios between now and 2050. The high series, using United Nations data, starts with a 2010 total fertility rate (TFR) of 1.51, increasing to 2.09 in 2045–50 as an upper limit. The middle series for this analysis uses data from the Korea Statistical Information Service (KOSIS), with a TFR starting at 1.15 in 2010, increasing to 1.28 by 2040, and remaining at that level through 2050. The low series (calculated by the author using Heilig demographic analysis software) utilizes a starting TFR of 1.2 for 2010, ending at 0.7 in 2050.

To get a finer sense of the supply of annual conscripts, population projections are shown for 20-year-olds. Age 20 was selected as being representative of conscripts in a given year, as well as being representative of the college-aged population. By focusing on one specific age over time, the dynamics of the fertility decline in South Korea become even more obvious, especially when matched with the potential number of conscripts required.



Sources: UN Department of Economic and Social Affairs, Population Division, World Population Prospects: The 2008 Revision (2009), <http://www.un.org/esa/population/>; Korean Statistical Information Service (KOSIS), "Population Projections" (2010), <http://www.kosis.kr/>.

Note: There appear to be no published data available on the number of conscripts that enter the military annually. An estimate of 400,000–425,000 for the number of annual conscripts allows the South Korean military to maintain a force of 680,000. Thus the number of annual recruits needed through 2020 is reduced in relation to the estimated size of the military.

series (see figure on previous page) indicates that the country will come close to producing the supply of needed men.

Increase service time? In an effort to make military service more attractive to recruits, in 2008 the Ministry of National Defense (MND) announced plans for a reduction of service terms by six months, to be implemented gradually over eight years. The official rationale for the reduction was that “gradually reducing the service period to relieve citizens’ burdens and allow more people to fulfill their obligations by assigning service duties fairly.”² Unfortunately, while a shorter service term might be appealing to potential recruits, such a reduction of service time would be counterproductive for the South Korean military and even works against the MND’s own stated goal of manpower planning (see figure on page 5). An increase, or at least no further reductions, of service time is the option that will work toward the MND planning goals and help offset the inevitable effects of low fertility on troop numbers.

The MND adjusted its approach in December 2010, freezing the reduction for time service in the army at 21 months. Additionally, the Presidential Committee on Defense Advancement proposed that service time be restored to 24 months for the army, but the final decision was to hold the service term at 21 months. Service terms for the navy and air force will be 23 and 24 months, respectively. The decision to hold the service time at 21 months for the army, rather than reducing it further, is a step in the right direction; the commission’s proposal to return to 24 months of service is the next critical step. This action would most effective if it is incorporated immediately, before the 21-month service time becomes the norm.

Also enacted in 2008 is a new opportunity for service members to elect to extend service time. The goal is to have, by 2020, 40,000 service members with combat and expert skills enlisted for an additional six to eight months, and an additional three years for those who operate advanced equipment. The goal of this extended service system is “to secure the following two types of servicemen: those adroit in combat and other skills, who are expected to be difficult to retain

once the period of military service has been reduced, and those trained in the operation of advanced equipment, who will be needed once high-tech equipment has been adopted following the Defense Reforms.”³ A reinstatement of the 24-month term of service in combination with this new elective extension of duty time for servicemen with specialized skills would have a significant, quickly realized effect on the size and composition of the military.

Increase fertility? In order to understand why increasing fertility is not a likely option for increasing the pool of recruits, it is critical to understand the history and socioeconomic reasons of the fertility decline started in the 1960s when the state disseminated messages promoting small families, which coincided with the country’s rapid rise of urbanization and industrialization.

Economic factors, in addition to demographic factors, have kept fertility rates very low. The 1997 economic crisis was devastating for Korea, with unemployment rates for men aged 20–24 jumping from 8.7 percent in 1997 to 19.4 percent in 1998.⁴ More recently, Korea has been affected by the international financial crisis of 2008. The economic shocks have led to diminishing expectations for labor market success, which is one of the factors leading to an increasing mean age at marriage.

Mean age at first marriage rose from 24.1 years in 1985 to 28.1 years in 2007; mean age at first birth was 27.2 years in 1995 and 29.6 years in 2005.⁵ In 1970, 88 percent of women aged 25–29 in South Korea were married; by 2005, that number had dropped to 40 percent.⁶ Delayed marriage and fewer persons marrying have been cited as the primary causes for the decline in the fertility rate between 1995 and 2005.⁷

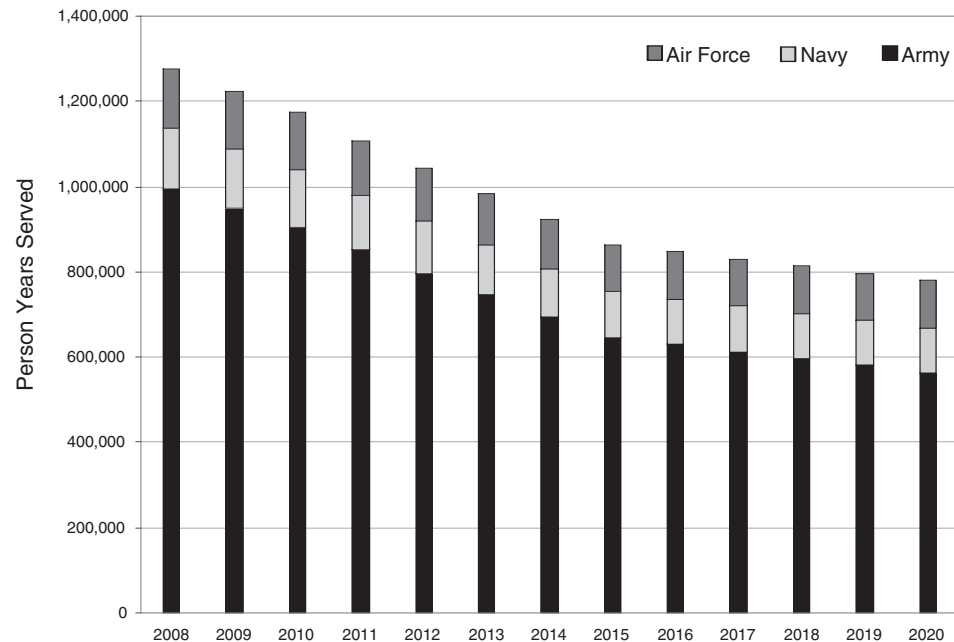
Labor force participation rates for women aged 25–29 rose from 47.9 percent in 1995 to 72.7 percent in 2007.⁸ However, despite increasing numbers of women in the workplace, many have found it difficult to integrate work and family roles successfully. Given the lack of public childcare facilities in Korea, the burden of caring for young children generally falls to families, and most specifically to mothers. Although there are no school fees for public elementary and

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Person years served by the conscription cohorts, based on service times in place as of February 27, 2011, South Korea: 2008–2020

The effect of the reduced time served in conjunction with the draw down in troop size is evident in a calculation of “person years served.” Each person who serves one year in the military is counted as one person year served. If ten conscripts serve two years each, the sum is twenty person years served, and so on. Calculations of the average number of days that a conscript serves are dependent on both the year in which a person enlisted and the branch of service.

The figure below shows the person years served based on the service requirements of 21 months for army personnel from 2011 to 2020, 23 months for the navy, and 24 months for the air force. The overall person years served is expected to fall 27 percent between 2011 and 2020. The reduction in troop size is responsible for 21 percent of the decline; the 2011 modified service period is responsible for the remaining 6 percent of the decline.



Note: Calculations based on data from MND 2008 (see endnote 2).

middle schools, extracurricular studies and private after-school academies (*hagwon*)—which are attended by most children—are very expensive and time-consuming. South Koreans spend more on education per capita than any other country. The cost of raising and educating a South Korean child is estimated to be at least US\$253,000.⁹

Pronatalist programs instituted in the past five years have not yet produced results, in large part because of socioeconomic developments that keep fertility low. Carl Haub of the Population Reference Bureau argues that increasing fertility in Korea must be accompanied by “changes in attitudes on women’s

roles by society (and men in particular), along with the establishment of programs and policies by government and businesses.”¹⁰ The country’s work culture and gendered society will require societal shifts for success of any pronatalist plan. In essence, there is no simple solution that will lead to an increase in fertility rates.

Increase immigration? The other demographic option, increasing immigration, would add to the overall population base of the country. Increased immigration, however, is not a feasible option for maintaining current troop size. There is currently no avenue

for immigrants to become citizens, and a relaxation of the citizenship requirement for military service would require a massive ideological change. South Korea traditionally has had very low rates of immigration; efforts to increase multiculturalism and ethnic diversity have not been successful. The integration of immigrants into the fabric of Korean society would be challenging: “Immigration in sufficient numbers to fill up the labor shortage due to low fertility and population aging would also arouse fears of loss of national identity.”¹¹

One means by which immigration could lead to higher fertility levels, or at least to larger numbers of children being born, is through international marriages. In 2004, there were 35,447 marriages between South Korean citizens and non-Koreans, which comprised 11.4 percent of all marriages.¹² Children of international marriages are considered Korean and, thus, would be eligible to serve in the military. The increasing number of international marriages will certainly challenge the notion of national identity and the myth of ethnic homogeneity in South Korea, but international marriages also represent one of the few positive demographic options for alleviating the quagmire facing the country.

More women in the military? The number of women serving in the South Korean military has been extremely limited. During the past 50 years, many other countries have utilized and integrated women into their armed forces. Notably, Israel drafts females, while the United States, Canada, Great Britain, the Netherlands, and Norway allow women into nearly all service branches. However, “in the case of Korea, during the past half-century, women have played a minor and non-substantial role in the South Korean armed forces due to constitutional and cultural restraints.”¹³

The Ministry of National Defense plans to increase the percentage of female commissioned officers from the current 4.3 percent (3,111 officers) to 7.7 percent by 2020. They also hope to expand the percentage of noncommissioned female officers from 2.9 percent (3,051 officers) to 5.5 percent in this same time period.¹⁴ The MND states that “all qualified

service members, regardless of gender, will be assigned to any job and will carry out the same missions during peace and war.”¹⁵ If there is a greater reliance on technology and less reliance on ground troops, then increased numbers of women might be feasible. Less certain is whether young women would find the military option desirable.

The inclusion of more women in the South Korean military would seem to be a simple solution to the shortage of young men, but it is evident that it will require parallel changes to the gendered structure of the country. Doo-Seung Hong, a professor of sociology at Seoul National University, argues that armed forces should be socially representative, and, furthermore, that social representation stems from citizenship.¹⁶ If military service is constructed as a right as well as an obligation, then marginalizing one group (women) limits their citizenship. The societal changes that would bring about acceptance of women into all areas of the South Korean military are likely to develop over a long period of time. Whether these changes occur by 2050 remains to be seen.

Military Planning

To maintain a sufficient force by 2020, the Ministry of National Defense must quickly institute major changes. The decline in the number of young men serving in the armed forces and the reduction in time served will inevitably lead to a leaner military. The overarching question is whether the dwindling supply of young men, military troop reductions, and time served reductions can be turned into opportunities, or if they will pose catastrophic problems for South Korea. The demographic analysis presented here points to four critical planning goals for the South Korean military.

The first step can be instituted immediately. Time served should be increased or stabilized at a minimum of 24 months for all branches of the military.

The second action is for the MND to move away from “a manpower-intensive structure to achieve a scientific, integrity-driven, technology-intensive structure.”¹⁷ The demographic projections clearly show that a leaner military will be required as early as 2020.

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A reported North Korean cyberattack in April 2011 bolsters the argument for a more technologically sophisticated South Korean military

The third planning goal for the MND is to develop technology. The budget for defense research and development increased by 11.5 percent in 2010 from the previous year, and is now 6.1 percent of the entire defense budget. The 2010–2014 Defense Plan calls for upgrading the development of high-tech weapon systems that would match an advanced country; the goal for the 2015–2019 period is developing state-of-the-art weapon systems. Although the US military is only twice as large as the South Korean force, the United States spends 50 times more on research and development than the South Korean military.¹⁸

The fourth planning goal is to continue to strengthen the alliance with the United States. Bruce Klingner, a senior research fellow at the Heritage Foundation's Asian Studies Center, argues that "Washington and Seoul should develop a joint strategic vision of the future purpose, objectives, and roles of the broader alliance and how it furthers the two countries' national interests. It will then be possible to identify the roles, missions, and required capabilities of the two militaries, and then implement the broader alliance through procurement, deployment, and training. The two governments must then engage in extensive public diplomacy to gain public support for the revised military partnership."¹⁹

The Ministry of National Defense faces great uncertainty about potential conflict with North Korea. The size of the North Korean military is expected to remain fairly stable. Fertility in North Korea was steady at replacement level (TFR of 2.1) from 1996 to 2008, and 2.0 since then. Barring any social or economic disasters, such as another famine, there should be a sufficient number of young people to continue serving in the North Korean military.

It is impossible to predict what kind of war might occur between North and South Korea. A ground war is still a possibility, but a reported North Korean

cyberattack in April 2011 bolsters the argument that a more technologically sophisticated South Korean military is needed. Some argue that North Korea will launch more cyberattacks and stealth tactics because the country "is so bankrupt that it can no longer train its troops or buy the technology needed to fight a conventional war."²⁰

It is equally difficult to know with certainty what degree of stabilization might be needed in North Korea if there is a reintegration of the two countries. If long-term stabilization efforts are required, United Nations forces and nongovernmental organizations will need to assist South Korean military efforts in peace-building. One anticipated major challenge will be the ability to manage a long-term commitment in the North with the need for troop rotation, which would necessitate a large enough force to allow troops to return to South Korea for periods of time. The type of war and reconciliation will determine in large part the size and type of military forces required of South Korea. This uncertainty requires the Ministry of National Defense to be prepared with several options. A protracted ground war would be very difficult for South Korea to sustain; the nation's demographic concerns strongly argue for a leaner, more technologically based military that includes more women.

The recent study on military balance from the International Institute for Strategic Studies reports that the current situation between North and South Korea is as dangerous as it has been at any point in the past 50 years.²¹ Although there is much uncertainty about what will happen in North Korea and when a regime change might occur, the timing of troop demands in South Korea will likely overlap with a rapid decline in the supply of young men to serve in the armed forces. This is an issue whose significance to the peace of the Korean peninsula and the alliance with the United States cannot be overstated.

Notes

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