

94-E-47

**NATIONAL DEFENSE UNIVERSITY
NATIONAL WAR COLLEGE**

**Korean Defense Industry:
Threat or Ally?**

CORE COURSE 4 ESSAY

BRUCE C. BADE/CLASS OF 94

CORE COURSE 4

FSL: DR. OTT

FACULTY ADVISOR: AMB SOMMER

February 22, 1994

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, 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. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 22 FEB 1994		2. REPORT TYPE		3. DATES COVERED 22-02-1994 to 22-02-1994	
4. TITLE AND SUBTITLE Korean Defense Industry: Threat or Ally?				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National War College, 300 5th Avenue, Fort Lesley J. McNair, Washington, DC, 20319-6000				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT see report					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES 12	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Korean Defense Industry: Threat or Ally?

A newspaper editorial during the 1990 congressional debate surrounding the US Government decision to authorize licensed production of F/A-18 aircraft in the Republic of Korea's Korean Fighter Program quoted Senator Alan Dixon (D-Ill), who said the program was a "sucker deal" and "a first step toward once again surrendering US technology and expertise to be used against us."¹ The editorial went on to argue that there was a danger that US technology transferred in such programs would be "used to arm potential adversaries five or 10 years down the road."

Senator Dixon echoed similar sentiments expressed earlier during the debate over the US-Japan agreement for co-development of the Japanese FS-X fighter aircraft, reflecting a growing concern in the United States that transfer of US technology through defense programs was facilitating development of foreign commercial competitors. Whether they were exporting jobs, creating commercial competitors, or providing adversaries the technology to counter our arms, defense programs that provided defense industrial capability to friends and allies were criticized more and more bitterly in the late 1980s and the early 1990s. The extensive debate since the mid-1980s over technology transfer and industrial "offsets" reflected a trend in which economic concerns began to overtake security concerns in US relationships with its major allies, a trend accelerated in the late 1980s by the end of the Cold War and a ballooning US trade deficit.² In 1988 the Congress passed legislation restricting

offsets, requiring the President to report on offsets in defense exports and to undertake active measures to reduce such offsets.³

The contentious debate delayed defense programs and caused considerable friction in security relationships with the allies. Korea was particularly affected because it depended more than most US allies on US technology for its defense. The matter remains an issue between the two countries. In 1991 Korea became the first nation to experience a US Government-imposed limitation on offsets in government-to-government programs when the Department of Defense restricted offsets in the Korean Fighter Program to 30%.

In view of Korea's growing industrial strength, the rapidly changing economic and security environments in Asia, and the maturing of the US-Korean security relationship, it is time to reconsider US policy and develop a new framework for defense industrial cooperation with Korea. While Senator Dixon eventually dropped his opposition and the Korean Fighter Program is now getting underway (albeit with a different aircraft), the issues of technology transfer and industrial offsets remain a source of friction in the security relationship between the US and Korea. Defense industrial cooperation between the two countries constitutes a relatively small portion of the bilateral trade, but such cooperation operates at a unique nexus in the overall bilateral relationship: it touches, at the same time, economic, trade, political and military concerns. Consequently, conflicts in defense industrial cooperation have potential to disrupt cooperation in other important areas.

Does transfer of defense technology to Korea constitute an economic or security threat to the US? Are there any longer

benefits to be derived from such transfers? I suggest that the US has a lot to lose by unduly restricting technology transfer to Korea, and a lot to gain by increasing defense industrial cooperation. Let us look first at the matter of threats.

Korea, like many other developing nations, is intent upon developing a substantial degree of defense industrial autonomy and an indigenous high technology commercial industry.⁴ There is no question Korean defense industries will compete with US industries (setting aside for the moment the question of what constitutes a US industry or a Korean industry, a fair question given increasing international investment patterns and industrial alliances). Nevertheless, when considering whether or not to permit US defense firms to transfer technology to Korean firms, the US Government must recognize two realities: first, Korea will develop indigenous defense industrial capability and high technology industries with or without the cooperation of the US and, second, the pace of that development will not be substantially slowed by US refusal to cooperate inasmuch as there are alternative sources of technology available (for example, from other defense equipment exporting nations such as Britain, France and Germany).

Even assuming Korean success in its development endeavors, however, a few statistics reveal a difference in scale that suggests Korea will not become a major competitor in defense, aerospace, or electronics within the foreseeable future. US arms production in the 1980s averaged \$85-\$95B per year; Korea's less than \$1B per year. US arms exports in the 1980s averaged about \$13B per year; Korea's averaged about \$100M per year and has been declining since the mid 1980s. The US spends an average of \$37B

per year in defense research and development; Korea spends only about \$70M per year.⁵ In the coming years, the US will substantially reduce its research, development and production expenditures and its exports, and Korea will modestly increase its defense research and development investments. Nevertheless, the disparity in the sizes will remain large.

Korea has developed indigenous design and production capabilities in ordnance, combat vehicles, and small combatant ships, and has the industrial capability to produce many components for and to assemble modern tanks, combat aircraft, and other vehicles. While the Korean Agency for Defense Development and Korean industry have developed such advanced weapons as a short-range air defense missile, Korea lacks an extensive research and testing establishment and is relatively far from attaining a capability for design and development of advanced technology weapon systems.⁶ Korean industry is only now moving from copying advanced industrial technologies to digesting and absorbing them, and it is still highly dependent on foreign sources even for its defense production. According to the Korea Defense Industrial Association, even the strong ordnance sector still relies on foreign sources for 30% of component parts.⁷ Nor do American industry officials fear Korean competition: the Aerospace Industries Association notes the exceptionally high costs of electronics and aerospace development and discounts the prospect of serious Korean competition in the foreseeable future.⁸

It does not appear that the Korea defense industry is poised to take away significant market shares from US defense exports.

But what about jobs? Korea imposes offset requirements for defense purchases (by policy, 30% of contract value), with a strong emphasis on direct, program-related industrial participation.⁹ In every such program involving Korean licensed production, Koreans are performing jobs that might otherwise be done by Americans.

That situation is considered by many Americans to constitute export of American jobs. However, that point of view overlooks the fact that absent a Korean acquisition, those jobs would not exist, anyway; certainly they would not exist in the US if Korea acquired the product from a third country. If a US firm secures a sale by agreeing to an offset arrangement under which a Korean firm produces part of the final product, it foregoes some American jobs but secures others that would not be gained had the Koreans found a better deal from a third country competitor. Offsets are an essential marketing tool in today's global defense equipment market. Even the unique security relationship between the US and the Republic of Korea no longer provides the US enough leverage to overcome the need to provide domestic jobs and technology benefits in the Republic of Korea when public Korean funds are being expended. In 1992, for example, Korea selected the Italian Oto Melara gun for its new frigates in spite of strong pressure from the US Government to buy the comparable American-made FMC/Northern Ordnance gun; offsets and technology transfer were crucial factors in the competition.

Jobs, then, can be lost rather than gained by overly restrictive or conservative approaches to defense technology transfers. But what about the threat of further transfer of our

technology to potential enemies? Senator Dixon's fear that technology transferred to Korea could someday be used against the US is theoretically valid, but not particularly realistic. Through arms exports licensing procedures the US Government controls the level of technology that can be transferred in licensed production programs and places restrictions on the further transfer of technology and related products to third parties. Neither the Government nor the US firms involved in licensed production are inclined to transfer the most advanced technologies, and the less advanced technologies are being diffused regardless of US controls. Unauthorized transfers of specific technologies or products to third countries by Korean firms are not a significant threat because continued access to US technology is a strong incentive for both the Korean government and Korean firms to adhere to the conditions of technology transfers, outweighing potential gains by a substantial margin. This is even more true today than it was during an earlier stage of Korean development, when defense production and defense exports were a significant factor in the development of the Korean economy; defense production now constitutes less than 3% of Korean industrial production.

To be sure, Korean defense firms still desire to export items produced under US licenses. The continuing Korean pressure for US permission for such sales, and the continuing reluctance of the US Government to grant it (US firms still producing the items generate pressure in Congress to restrict such sales), are irritants in the defense industrial relationship.¹⁰ In the past, restrictions imposed by the US government have been circumvented

illegally by Korean firms,¹¹ making it even more difficult for the US Government grant the permission the Koreans seek. Still, Koreans find it difficult to understand why the US restricts the sale of items like .50 caliber ammunition, which has been in production for over 50 years and is available worldwide from a number of producers. Indeed, unless you are a relatively inefficient producer facing stiff competition, the restriction makes little sense. Certainly Korean sale of .50 cal ammunition does not constitute a threat to the US defense industrial base, nor in light of widespread availability is the sale of such ammunition an additional threat to US security.

It does not appear that a relatively forward leaning policy with respect to industrial cooperation and technology sharing with Korea would pose a significant threat to the US in terms of commercial competitiveness or military vulnerability. The benefits of such a policy, however, would be substantial.

Korean acquisition of US military equipment--as opposed to equally effective equipment acquired from third countries--is in the US interest for a number of reasons. First, even when substantial portions of a system are made in Korea, there are benefits to the US industrial base: there is always a certain amount of work done in the US, and such programs always include some US components (usually the most sophisticated ones); profits and royalty fees to US firms are reinvested in research, improving the future competitiveness of US companies; and the US firms usually establish relationships with Korean firms that bring about further business.

Equally important military benefits flow from Korean

Bade 8

acquisition of US weapon systems. Interoperability with US forces is an important force multiplier in coalition warfare. Common systems promote common tactics and can also yield savings in training costs to both countries. Industrial capacity in Korea provides repair and maintenance support for US equipment, and additional sources for spare parts constitute another benefit. Finally, the relationships established between US and Korean firms in programs involving industrial cooperation, and the relationships between US and Korean military personnel managing the programs and training together on the systems, are intangible but very real assets in the overall security relationship.

The US has fundamental and continuing interests in a strong, stable Korea tied closely to the US by alliance, trade, and common military weapons and tactics. That close relationship will become increasingly valuable to the US in the uncertain decades ahead. Koreans--particularly those with national security interests and responsibilities--want such a relationship. However, as the post-Cold War security situation in Asia evolves, the US-Korean relationship will be subject to new forces either pushing the two nations together or pulling them apart. Korea's imperative to develop technologically and to compete as an industrially developed nation is one of the forces likely to pull them apart. New options--Korean commercial and trade relations with Russia and China, not to mention increasing business with Southeast Asian and European nations--also contribute to those forces.

Therefore, to the extent that technology transfer restrictions and offset limitations continue to generate friction in the bilateral relationship, it is in the US interest to

diminish those frictions and to seek ways to improve defense industrial cooperation. Korean government officials and Korean business leaders have suggested to US Government and US industry officials that defense industrial cooperation based upon the strengths of each country would benefit both countries. Korea has the capability and capacity to fulfill US requirements for less sophisticated defense articles at lower cost than can be attained in the US, and the US has advanced technology needed to modernize the Korean military forces. As the Agency for Defense Development and Korean industry improve their research and development capabilities, additional opportunities for cooperation will transpire.¹² Such mutually beneficial cooperation would perpetuate the traditional defense equipment relationship between the US and Korea. In light of global industrial realities and the vital interests the US has in its relationship with Korea, it would be folly to undermine that relationship under the false assumption that we were protecting US jobs and technology.

End Notes

1. Quoted in St. Louis Post-Dispatch, Friday, December 7, 1990, p. 3C2.
2. Offsets are a range of industrial and commercial compensation practices required as a condition of a purchase in either government-to-government or commercial sales of defense articles and/or defense services as defined by the Arms Export Control Act and the International Traffic in Arms Regulation, as defined in Offsets in Military Exports published by the Office of Management and Budget. Washington: Executive Office of the President, 1991
3. Offsets in Military Exports
4. Defense Daily, Vol. 166 No. 54, 21 March 1991, p. 448;
Sanders, Ralph. Arms Industries. Washington: National Defense University Press, 1990, p. 80;
American Defense Preparedness Association. ADPA-KDIA Joint Steering Committee Meeting

Minutes. Washington: ADPA, 1993, Attachment 6, pp. 8-9

5. Krause, Keith. Arms and the State: Patterns of Military Production and Trade. Cambridge: Cambridge University Press, 1992, pp. 90, 93, 164
6. ADPA, Attch 6, pp. 5-8
7. ADPA , Attch 6 , p. 9
8. Defense Electronics, May 1990, p. 48; Aerospace Research Center. The U.S. Aerospace Industry in the 1990s: A Global Perspective. Washington: Aerospace Industries Association, 1991
9. Republic of Korea. Defense Logistics Agency. Korean Defense Offset Program Guidelines. Seoul: Ministry of National Defense, 1992
10. The Korean complaint is heard at annual bilateral defense industrial cooperation meetings between the Department of Defense and the Ministry of National Defense, as well as in industry fora. The latest is recorded in ADPA, p. 3
11. The Koreans exported large quantities of M-16 rifle knock-offs in the late 1970s without the required US approval, claiming when challenged that the rifles were not really the ones licensed, but rather were a "Korean design." The claim was not persuasive, and in response to persistent complaints from the US company with which the Koreans competed, the US Government eventually got the Koreans to stop exporting the weapons.
12. The Department of Defense and the Korean Ministry of National Defense have entered into several cooperative research and development agreements since 1988, jointly conducting research on explosives storage, missile seekers, and harbor defense systems.

Works Consulted

Aerospace Research Center. The U.S. Aerospace Industry in the 1990s: A Global Perspective. Washington: Aerospace Industries Association, 1991

American Defense Preparedness Association. ADPA-KDIA Joint Steering Committee Meeting Minutes. Washington: ADPA, 1993

Electronic Industries Association. Global Defense Trade--An Emerging Issue. Washington: EIA, 1989

Ferrari, Paul L., Jeffery W. Knopf and Raul L. Madrid. U.S. Arms Exports: Policies and Contractors. Washington: Investor Responsibility Research Center, 1987

Krause, Keith. Arms and the State: Patterns of Military Production and Trade. Cambridge: Cambridge University Press, 1992

Republic of Korea. Defense Logistics Agency. Korean Defense Offset Program Guidelines. Seoul: Ministry of National Defense, 1992

Sanders, Ralph. Arms Industries. Washington: National Defense University Press, 1990

United States. Cong. Office of Technology Assessment. Global Arms Trade. Washington: US Government Printing Office, 1991

United States. Office of Management and Budget. Offsets in Military Exports. Washington: Executive Office of the President, 1991