

## **SOUTH KOREA'S DEFENSE INDUSTRY: AN ASSET FOR THE U.S.**

### **INTRODUCTION**

In response to the threat from North Korea in the late 1960s, the Republic of Korea (ROK or South Korea) started to build up its defense industry. Taking advantage of U.S. technical assistance and a booming domestic economy, South Korean defense production grew rapidly. Seoul now is able to supply almost 100 percent of the conventional weapons it needs for self-defense, including small arms, large caliber guns, armored vehicles, destroyers, and aircraft.<sup>1</sup>

Even so, South Korea is faced with severe maintenance and growth problems in its defense industry. As domestic demand for weapons was filled, the production rate of defense plants declined. Some were even shut down. To maintain its defense industry, the South Korean government began to sell arms abroad.

The U.S., however, has become the major obstacle to increased ROK arms exports. Military hardware manufactured in Korea utilizing American designs or containing U.S. components cannot be exported without U.S. government approval. The U.S. has been reluctant to extend such approval. In 1981-1982, for instance, Seoul requested

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1. Defense Procurement Agency, Ministry of National Defense (MND), Korean Military Supplies, Seoul, Korea, 1984.

permission to export \$55.4 million in arms; only \$1.7 million (3 percent) was approved by Washington.<sup>2</sup>

The U.S. restricts Korea's exports of arms to other countries because American companies claim that ROK competition damages U.S. defense industries. The evidence suggests the contrary.

First, the ROK imports 43 percent of the parts needed in its defense industry from the U.S., amounting to over \$1 billion annually.<sup>3</sup>

Second, the U.S. and the ROK both would benefit enormously from increased coproduction of conventional weapons. There are serious deficiencies in the U.S. at the subcontractors' level; South Korean industries could fill this void.<sup>4</sup>

Third, as weapons systems become more complex and expensive, the U.S. and the ROK could benefit from cooperation in weapons research and development.

Fourth, since the weapons systems currently used by the ROK are those used by the U.S., the ROK defense industry could help repair U.S. military equipment and supply arms and ammunition to the U.S. in case of a regional emergency.

Despite the compelling logic behind U.S.-ROK arms production cooperation, there has been no attempt by Washington to help Korea's defense industry. As such, U.S.-ROK arms production cooperation should be explored thoroughly by Washington and Seoul, and the U.S. should consider lifting some of the restrictions on ROK arms sales.

## THE KOREAN DEFENSE INDUSTRY

Until the late 1960s, there was no defense industry in the Republic of Korea. Following a series of hostile military acts by North Korea and an apparent weakening of the U.S. security commitment

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2. Richard Halloran, "Weinberger Says U.S. Will Maintain Curbs on Seoul's Sales of Arms," The New York Times, April 1, 1982, p. A8.

3. Kwang-il Baek and Chung-in Moon, "Loyalty, Voice, or Exit?: The U.S. Third Country Sales Regulation and Korean Countervailing Strategies," Paper Presented at the 26th Annual International Studies Association Conference, Washington, D.C., March 5-9, 1985, p. 30.

4. U.S. Congress, House Armed Services Committee, Industrial Base Panel, The Ailing Defense Industrial Base: Unready for Crisis (Washington, D.C.: U.S. Government Printing Office, 1980), p. 11.

to Seoul, the ROK government decided to develop the capability of producing its own weapons.

Spurring the decision were the January 1968 North Korean attack on the Blue House presidential residence in downtown Seoul and North Korea's capture of the American intelligence ship Pueblo. Less than one year later, Pyongyang shot down a U.S. EC-121 reconnaissance aircraft over the East China Sea. To Seoul's extraordinary shock, the U.S. responded only with verbal denunciation.

The proclamation of the Nixon Doctrine in July 1969 stating that America's allies would be expected to fight on their own, the withdrawal of the U.S. Army 7th Division from Korea on March 27, 1971, the fall of South Vietnam in April 1975, and Jimmy Carter's announcement in March 1977 that he planned to withdraw all U.S. ground forces from Korea convinced Seoul that the U.S. was backing away from its security commitments. As a result, the South Korean government began to build up its defense industrial base to ensure military self-sufficiency.

The ROK government assumed direct control of overall defense production. It also fostered development of complementary industries, such as heavy chemicals. U.S. foreign military sales to Korea, which totalled about \$2 billion between 1971 and 1984, eased the burden on Seoul's defense industry and helped modernize the ROK armed forces. U.S. technical assistance played a vital role through the transfer of technology, exchange of scientists and engineers, licensing agreements for manufacturing, and coproduction of certain weapons systems.

The buildup of the ROK's defense industries has been very successful. Today Seoul can produce a broad range of conventional weapons, armored vehicles, aircraft, and naval vessels. South Korea successfully tested its own surface-to-surface missile in 1978, becoming the seventh nation in the world to produce such weapons.<sup>5</sup> Hughes 500 MD helicopters and Northrop F-5E/F jet fighters are coproduced under a license with U.S. companies. South Korea also developed its own tanks (ROKIT), which generally are similar to the U.S. Army's M1. Other major defense items produced in South Korea include:

Weapons:	Multi-Tube Rocket Launcher, M109A2 (155mm Self-Propelled Howitzer), M114A2 (155mm Howitzer), M101A1 (105mm Howitzer), M40A2 (106mm Recoilless Rifle), M67 (90mm Recoilless Rifle), M19 (60mm Mortar), M29A1 (81mm Mortar), M30 (4.2
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5. Korea Herald, September 27, 1978.

6. Defense Procurement Agency, MND, op. cit.

in. Mortar), 20mm multi-barrelled cannon, M16 rifle, M60m machine gun.

**Munitions:** M49A4 (60mm cartridge), M37A1 (81mm cartridge), M329A1 (4.2 in. cartridge), M1 (105mm cartridge), M107 (155mm projectile), M106 (8 in. projectile), M549 (155mm rocket assist projectile), M431A2 (90mm cartridge), M344A1 (106mm cartridge), 20mm cartridge, all kinds of ammunitions for small weapons and fuses.

**Aircraft:** Hughes 500 MD helicopter, Northrop F-5E/F jet fighters.

**Naval Ships:** Fast Patrol Boats, Frigate, Corvette.

**Communication Equipment:**

AN/VRC-12 (short-range, two-way radiotelephone communication system), AN-URC-87 (solid state portable manpack and vehicular radio set), AN/PRC-77 (portable manpack, battery operated radio set), KSB-22/PT (lightweight field-type switch board), Telephone Carrier Systems TCC-7K, TCC-11K and Delta-Mux.

**Missiles:** Nike Hercules Surface-to-Surface Missile, Honest John Unguided Tactical Missile, Hawk Missile System and Anti-ship Missile.

**Armored Vehicles:**

M48 tank, FIAT 6614 armored personnel carrier, ROK indigenous tank.

As the requirements of the South Korean armed forces were satisfied, arms production declined. In 1984 the average production rate of the ROK defense industry sank to below 42 percent of capacity. Nine firms went bankrupt, and another nine are on the verge of collapse. To ensure continued arms production self-sufficiency, the South Korean defense industry turned increasingly toward overseas sales.

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7. Baek and Moon, op. cit., p. 9.

## KOREA'S ARMS EXPORTS AND U.S. POLICY

According to figures compiled by the U.S. Arms Control and Disarmament Agency (ACDA), South Korea's arms exports in 1983 totalled \$355 million, or 1.5 percent of the country's total exports. Weapons sold include small arms, ammunition, patrol craft, and various vehicles. Sales were mainly to Asia, the Middle East, and South America.

ROK arms exports face heavy competition from Israel, Brazil, China, India, North Korea, Yugoslavia, and Bulgaria. But the major obstacle is the U.S. Initially, Washington supported the development of the Korean defense industry and transferred to it much defense-related technology. As ROK arms trade increased, however, the U.S. began to place rigid restrictions on Seoul's exports of those arms based on American designs or containing U.S.-made components. Although Washington has approved some exports on a case-by-case basis, it generally objects to South Korea's arms sales on the grounds that they amount to "direct competition with U.S. industries."<sup>9</sup>

Most weapons made in South Korea are based on U.S. technology or modified from original U.S. weapons. Other ROK weapons, however, are quite different from those of the U.S. although the specifications are the same. These include many light weapons, communications equipment, howitzers, antitank missiles, and military vehicles. Seoul adopts U.S. weapons standards to increase interoperability and logistical support between U.S. and ROK troops.

Washington applies three criteria to Korea's requests to sell arms to other countries: 1) the political views and policies of the recipient nation; 2) the production status of the U.S. defense industry; and 3) the possibility of economic loss to U.S. defense firms. The U.S. Army's Security Assistance Center, which must approve these sales, usually assumes that Korean sales mean reduced production opportunities for U.S. defense industries. It thus disapproves most sales.<sup>10</sup> As a result of this policy, South Korea's defense industrial base may have to be dismantled unless it finds more production opportunities.

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8. Arms Control and Disarmament Agency, World Military Expenditures and Arms Transfers 1973-1983, Washington, D.C., 1985, p. 111.

9. U.S. Congress, Senate Foreign Relations Committee, U.S. Troop Withdrawal from the Republic of Korea, 2nd Session, 95th Congress, 1978, p. 54.

10. Mobilization Concepts Development Center, INSS, National Defense University, The Korean Defense Industry Posture Study, Washington, D.C., 1984, p. 9.

## ARMS PRODUCTION COOPERATION

Due to the great expense of developing and producing modern weapons, Western allied countries increasingly cooperate in arms production. To date, South Korea's participation in coproduction programs has been limited. During the 1977-1982 period, for example, U.S. bilateral production arrangements with its NATO allies exceeded \$8.6 billion; U.S.-ROK coproduction arrangements amounted to only \$688 million.<sup>11</sup>

In its 1985 report to the Congress on "Standardization of Equipment within NATO," the Pentagon stated that it "strongly supports cooperative armaments programs, will continue to be a strong advocate for them within the U.S. Government and NATO, and will continue its active efforts to support the ongoing standardization programs within the Alliance...."<sup>12</sup> To encourage bilateral arms cooperation and to pool limited resources, the U.S. has signed agreements with its European NATO allies, Israel, Australia, Switzerland, and Canada.

Each of the U.S. armed services can participate in arms cooperation programs. For example, the U.S. Army is reviewing the possibility of cooperative funding or codevelopment of medium-range remotely piloted vehicles with several NATO countries. To spur NATO's cooperation in such efforts, Congress recently approved \$250 million for NATO cooperative weapons development. The U.S. should increase arms production cooperation with Seoul as well.

Demand for a share of production is becoming a common aspect of international arms sales. Many countries buying U.S. equipment now require "offset agreements." These include technology transfers, investment, and subcontracts in the foreign country involved. The U.S. government has offset arrangements with Canada, Australia, Belgium, Norway, Denmark, the Netherlands, Switzerland, Italy, the United Kingdom, Egypt, and Israel. There also are offset agreements on a company-to-company basis. From 1976 to 1981, U.S. firms signed defense coproduction agreements worth \$13.9 billion and associated offset agreements worth \$8.6 billion.<sup>13</sup> Because of the intense competition between arms exporters, offsets often can exceed the value of the original contract.

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11. General Accounting Office, U.S. Security and Military Assistance: Programs and Related Activities, Report No. GAO/ID-82-40, June 1, 1982, Washington, D.C., pp. 80-81.

12. Department of Defense, Standardization of Equipment within NATO, 11th Report to the United States Congress, January 1985, p. 3.

13. General Accounting Office, op. cit., pp. 82-84.

The U.S. does not treat South Korea as favorably in terms of offset arrangements as it does its NATO allies, Israel, and Egypt. Favorable treatment also should be extended to Seoul because of the U.S.-ROK Mutual Defense Treaty, the 40,000 U.S. troops stationed in South Korea, and Seoul's purchase of more than \$1 billion annually of U.S. military items.

#### GLOBAL DEFENSE INDUSTRIAL PLANNING

From 1969 to 1975, U.S. defense procurement dropped from \$44 billion to \$17 billion, the lowest level since World War II.<sup>14</sup> During this same period, the U.S. defense industry began to deteriorate because of declining productivity, aging facilities, and skilled labor shortages. The lower tiers of the U.S. defense industry, such as subcontractors and parts suppliers, declined especially rapidly. From 1967 to 1981, the total number of companies involved in aerospace production fell from 6,000 to 3,500. Meanwhile, the Soviet Union's defense industrial base continued to grow.<sup>15</sup>

In response to the widening gap between the U.S. and the Soviet defense industrial bases, the Pentagon noted in 1981:

U.S. industrial mobilization capabilities cannot possibly make up such deficiencies as Europe may have plus providing for our own needs. Nor could we do it in time....This means NATO must have (1) a collective military capability, (2) a collective military-industrial effort to provide that capability, and (3) a collective military preparedness to insure time to mobilize.<sup>16</sup>

Combined industrial mobilization among the West's allies is urgently needed to redress the above weaknesses. If the allies in North America (the United States and Canada), Western Europe, and the Pacific (Korea, Japan, Australia, and New Zealand) were to reach an agreement on mutual industrial mobilization in case of crisis, the Free World could produce sufficient weapons to meet any emergency.

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14. Jacques S. Gansler, The Defense Industry (Cambridge, Massachusetts: MIT Press, 1980), pp. 6-7.

15. Department of Defense, Soviet Military Power (Washington, D.C.: U.S. Government Printing Office, 1984), p. 91.

16. Secretary of Defense Harold Brown, Rationalization/Standardization Within NATO, Seventh Annual Report to Congress, January 1981, p. 13.

In addition to the weapons it already produces, Seoul is developing advanced weapons independently and under coproduction agreements with the U.S. Korea's defense industrial base could contribute, therefore, to overall allied defense industrial mobilization capability.

## CONCLUSION

When South Korea started to build its defense industry in the late 1960s, it lacked defense technology, skilled labor, a modern economy, and experience in large-scale military production. Since that time, however, Seoul has developed modern arms production facilities and now maintains a ready industrial base for national emergencies. But the future of the ROK's defense industrial base is threatened because of a shortage of domestic demand for military products.

To maintain defense plant viability and hence national security, South Korea needs to export military products. Currently the U.S. restricts Korea's overseas sales ostensibly to protect U.S. defense industries. But while prime defense contractors in the U.S. seem reasonably healthy, subcontractors and lower tiers of the American defense industry are declining because of aging facilities and skilled labor shortages. To compensate for this and at the same time to help Seoul maintain its industrial base, the U.S. should consider the defense production contributions that South Korea can make.

Washington has concluded agreements with NATO and other allies for codevelopment and coproduction of military equipment and for many types of offset arrangements. In addition, the U.S. encourages the standardization and interoperability of U.S.-NATO weapons. This U.S. policy could be extended to South Korea, which has a strong military relationship with Washington and possesses a great arms production potential.

The South Korean defense industry could complement the U.S. defense industry. When reviewing Seoul's requests to sell arms, therefore, Washington should loosen its restrictions on items that already have been phased out of the U.S. inventory. Instead of restricting South Korea's arms sales, the U.S. government should expand opportunities for the export of Korean-made components for use in U.S. weapons systems. Finally, Washington should make its arms sales deals with Seoul as equitable as those it signs with NATO, specifically approving more offset arrangements to allow the ROK defense industry to keep pace with weapons modernization.

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