# Japanese Defense Policymaking and Industry

# Security Policymaking: The Players

Defense policies are formed by committee in Japan; they are not strictly the domain of one agency. While the U.S. Department of Defense does not have total control over the formulation of American security and defense policies, DoD is nevertheless the lead agency in articulating the nature of, and appropriate response to perceived security threats facing the United States and its allies.

Such is not the case in Japan. The Japan Defense Agency (JDA) occupies a secondary station in the overall security bureaucracy. It is not a major cabinet position, but rather a secondary state agency. Officials on detail from the Ministries of Foreign Affairs (MOFA), Finance (MOF) and International Trade and Industry (MITI) are involved in key decisions in policy planning and procurement.

Although JDA is the lead agency in drafting defense policies, those policies are only part of a broader security policy structure for which the Ministry of Foreign Affairs takes primary responsibility. Thus, JDA struggles to keep its defense policies from being subjugated to MOFA security policies in the bureaucracy. Policy disputes are resolved through the Security Council, consisting of the finance minister, foreign minister, chief cabinet secretary, the chairman of the National Public Safety Commission, and the directors general of the defense and economic planning agency. The prime minister chairs the Security Councils

Given the differences in interests and perceptions among various agencies and ministries, it is understandable that Japan's overall approach to security would also differ from that of the United States. What are those interests and perceptions, and their importance to the security policymaking structure?

# **Japan Defense Agency**

Given JDA's status as a junior partner in its own domain, an important bureaucratic priority is to establish itself vis-à-vis the most powerful ministries involved in defense policy formulation. JDA's position in this process forces it to view policies in terms of how they will affect its prestige as an agency and its bargaining power relative to the bureaucracy. This is particularly true in the uniformed services which, because of Japan's historical experience, policymakers and voters treat with suspicion.

# **Ministry of Foreign Affairs**

In the broadest context, MOFA is the most important spokesman for security policy in Japan. It defines security broadly and in international terms to include suitable defense spending levels for Japan, the nature of the Soviet threat, appropriate procurement for the Self-Defense Forces (SDF), and the role of Japanese aid programs in enhancing regional and global security.

Despite the general Japanese willingness to identify the Soviet Union as the principal security threat in Japan, Japanese officials differ on the nature of and appropriate response to that threat. For example, some MOFA officials speak of the "Soviet threat" with U.S. relations in mind. The implication is that Japan gains favor with the United States, and thus experiences less pressure in other policy areas, as a result of its support of the American perception of the Soviet threat. This demonstrates the primacy of the United States in MOFA's overall policy priorities. The 1983 exchange of notes on defense technology transfers, for example, has been interpreted as a means for the Japanese Government to strengthen ties with the United States and reduce immediate pressures on the economic front.

<sup>1</sup>This section of app. C is based partly on information drawn from the following sources: Gregg A. Rubinstein in, Option 2000: Politics and High Technology in Japan's Defense and Strategic Future, Ronald A. Morse (cd.) (Washington DC: Woodrow Wilson International Center for Scholars, 1987), pp. 47-60; Paul F. Langer, Japanese National Security Policy: Domestic Determinants, Rand Report R- 1030-ISA (Santa Monica, CA: Rand Corp., 1972); John Endicott, in Committee on Foreign Affairs, Government Decisionmaking in Japan: Implications for the United States (Washington, DC: Government Printing Office, 1982), pp. 51-70.

<sup>2</sup>Endicott, op. cit., foomote 1.

<sup>3</sup>The Security Council was reconstituted from the National Defense Council (NDC). The NDC, unlike the current Security Council, had no authority to involve itself in crisis situations or specific actions by Japanese troops in the event of actual conflict. The Security Council was established in 1986, incorporating the NDC'S authority and expanding it, largely when the limitations of Japanese Government decisionmaking were made evident in the Korean Airlines 007 incident. Although not sitting members, the Minister of International Trade and Industry and the Director General of the Science and Technology Agency also took part in NDC deliberations and have the opportunity to provide input into the Security Council at the discretion of the c h - .

<sup>4</sup>Mike M. Mochizuki, ''Japan's Search for Strategy," *International Security*, Winter 1983/84, vol. 8, No. 3, pp. 158-160. A consensus is far from evident among the writings of Japanese analysts. For a range of views, see Hisahiko Okazaki, *A Grand Strategy for Japanese Defense* (Lanham, *MD*: University of America Press, 1986); Masashi Nishihara, "Soviet Moves in Southeast Asia and the Southwest Pacific Today," paper presented at Japan-U.S. Joint Study on the Soviet Union, Nov. 7-8, 1987; and Richard H. Solomon and Masataka Kosaka, *The Soviet Far East Military Build-up: Nuclear Dilemmas and Asian Security* (Dover, MA: Auburn House, 1986).

5. What Ever Happened to Defense Technology Transfers?, JEI Reports, No. 30A, Aug. 7,1987.

# Ministry of International Trade and Industry

Although MITI is a commercial and industrial ministry, it is an important player in the defense and security policymaking framework. Furthermore, it is likely that MITI's role will strengthen over the coming years because of the security-economic linkage evident in Japanese policymaking and the growing importance of dual-use technologies to overall defense production. MITI exerts influence through the Security Council, its Aircraft and Ordnance Division, and through seconded officials in JDA's equipment bureau, whose director general invariably has served previously as MITI Aircraft and Ordnance Division director.<sup>6</sup>

#### **Ministry of Finance**

The Ministry of Finance has been a critical player in defense and security decisions throughout the postwar period, particularly with the articulation of the "minimum necessary defense" policy. The policy outlined in the early 1950s restricted defense expenditures due to the need to rebuild the domestic economy, suspicion of militaristic revivals after the war, and the protective presence of U.S. forces in Asia. A combination of economic growth and conscientious restraints on spending brought total defense expenditures from 1.78 percent of gross national product in 1954 to under 1.0 percent in 1963. Spending hovered around the 1 percent level for the following 27 years, although the 1 percent limit, formalized in a Miki cabinet decision of 1976, was dropped in 1987.

While concern with a specific GNP/defense spending ratio is not a major fixation at the ministry, restraining total defense spending is still an article of faith at MOF. The broader notion of security to MOF means fiscal soundness: without a stable government and sound fiscal policy, it would be impossible to have any domestic economy at all, much less a defense establishment, Thus, further spending on defense must be defended in terms of its positive impact on the domestic economy.

#### **Politicians**

Political support for defense in Japan is mixed, There are few spokesmen for defense policy issues, and defense is not an area in which politicians can secure constituent support. This encourages politicians to focus instead on

the patronage aspects of defense policies, most evident in the income and employment generated by large procurement contracts.

#### **Domestic Industry**

Domestic industries, especially the larger firms such as Mitsubishi Heavy Industries (MI-H), are looking to defense for future growth. Industry demonstrated significant influence over defense policy and procurement decisions in the FSX case, where only high-level political intervention kept the project from becoming a totally domestic effort.

# Defense and Security

Japanese security policy rests squarely on economic foundations. The Yoshida doctrine, a broad policy approach implemented by Prime Minister Shigeru Yoshida in the immediate postwar period, emphasized economic recovery over military growth. That policy has dominated Liberal Democratic Party thinking and is widely embraced by the general public. Such a policy, however, does not mean that the government is uniformly opposed to military spending or to expanding procurement orders. One analyst notes that:

...minimally, economic security is associated in Japan with the maintenance of a stable supply of raw materials and access to foreign markets. Maximally, the concept is associated with control of production for domestic needs whenever possible."

Policymakers are inclined to support defense-related spending when it has an identifiable and positive impact on the domestic economy. It is not just the deployment of weapons that makes Japan secure, but also their strong domestic production.

Higher defense spending can also satisfy the diverse interests of other players in the security policy maker arena. For MOFA, unrestrained increases would pose a serious diplomatic problem, but measured increases both help the ministry counter charges of a free ride on defense and demonstrate that Japan is contributing more to the burden of regional defense. MITI's desire to stimulate critical industrial sectors also can be satisfied through new procurement programs, provided they do not overwhelm industrial capabilities or divert resources from other civilian sectors. Even MOF can tolerate spending in-

<sup>6</sup>Visions of Japan's economic future and security role are outlined in the May 1988 report Nihon no Sentaku (Tokyo:Tsusho Sangyo Chosakai, 1988), prepared by a special panel that included academics, corporate representatives, and think-tank members. The report is significant, among other reasons, for its frank assessment of security and economic matters.

<sup>&</sup>lt;sup>7</sup>Research Institute for Peace and Security, Asian Security 1980 (Tokyo: Nikkei Business Publishing Co., 1980), pp. 193-194; Japan Defense Agency, Defense of Japan 2970 (Tokyo: Japan Defense Agency, 1970), p. 97; Japan Defense Agency, Defense of Japan 1987 (Tokyo: Japan Times Co., 1987), pp. 153-155; Yomiuri Shimbun, U.S. edition, June 14, 1988.

<sup>&</sup>lt;sup>8</sup>Takashi Inoguchi and Tomoaki Iwai, Zokugiin no Kenkyu (Tokyo: Nihon Keizai Shimbunsha, 1987), pp. 105ff; 209-210.

<sup>&</sup>lt;sup>9</sup>Ibid.

<sup>10</sup> For an examination of the interrelationship in Japan between economic and security issues, see U.S. House of Representatives, Committee on Ways and Means, "East Asia: Challenges for U.S. Economic and Security Interests in the 1990s," Committee Print 10WO, 100th Congress, 2nd sess., Sept. 26, 1988.

<sup>1</sup> Raymond Ahearn, Library of Congress, Congressional Research Service, "Japan: prospects for Greater Market Openness," June 26, 1989, p. 9.

creases if they are structured to maintain the appearance of a low overall resource commitment to defense. <sup>12</sup> Table C-1 gives Japan's defense budgets since 1955.

# Japan's Defense Industry and Market

Key Japanese corporations, most of them with links to defense production in the pre-war and World War II period, have played an important role in defense production and procurement decisions throughout the postwar period. Companies like Mitsubishi Heavy Industries, NEC, Kawasaki Heavy Industries (KHI), Toshiba, and Mitsubishi Electric Co. (MELCO) have won defense contracts worth billions of dollars for tanks, naval vessels, military aircraft, heavy artillery, radar systems, and missiles. In keeping with longstanding policy, Japanese firms now satisfy well over 80 percent of domestic weapons and military equipment needs.13 JDA and MITI's Aircraft and Ordnance Division emphasize domestic procurement whenever feasible, opting only when necessary for licensed production in Japan of foreign systems. JDA spends more than 80 percent of weapons funds internally, despite the potential cost advantages of direct purchases from abroad.

Other reasons for the emphasis on local production include the desire to develop new domestic markets, the need to enhance the domestic industrial technology base through infusions of military related technology and production, the desire to reduce dependence on the United States, and the hope of maximizing policy and marketing options by generating indigenous systems.

Most Japanese defense contractors are multifaceted companies, which produce mainly civilian goods. Defense production is expanding but accounts for only 0.5 percent of Japan's total industrial output, <sup>14</sup> and defense-related sales represent small (though growing) percentages of total sales for most companies. For example, military equipment comprises only 15 percent of MHI's total sales. <sup>15</sup>

The defense market is highly oligopolistic. The top 5 contractors account for over 50 percent of total contracts and the top 10 garner 65 percent (see table C-2). MHI has been and remains by far the most important contractor, accounting for one-fourth of all defense production over the last several years and the Mitsubishi group as a whole accounts for an even higher total. The concentration of defense sales in a small group of highly integrated, prestigious, and influential firms presents opportunities

Table C-I-Japan's Initial Defense Budget, Fiscal Years 1955 through 1988

| 1986     3,343.6     6.6     0.993       1987     3,504.0     5.2     1.04   |             |           |      |       |
|--|-------------|-----------|------|-------|
| 1965     301.4     9.6     1.07       1975     1,327.3     21.4     0.84       1980     2,230.2     6.5     0.90       1981     2,400.0     7.6     0.91       1982     2,586.1     7.8     0.93       1983     2,754.2     6.5     0.98       1984     2,934.7     6.6     0.99       1985     3,137.2     6.9     0.997       1986     3,343.6     6.6     0.993       1987     3,504.0     5.2     1.04                                 | Fiscal year |           |      |       |
| 1975       1,327.3       21.4       0.84         1980       2,230.2       6.5       0.90         1981       2,400.0       7.6       0.91         1982       2,586.1       7.8       0.93         1983       2,754.2       6.5       0.98         1984       2,934.7       6.6       0.99         1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04 | 1955        | . 134.9   | -3.3 | 1.78  |
| 1980       2,230.2       6.5       0.90         1981       2,400.0       7.6       0.91         1982       2,586.1       7.8       0.93         1983       2,754.2       6.5       0.98         1984       2,934.7       6.6       0.99         1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04  | 1965        | 301.4     | 9.6  | 1.07  |
| 1981       2,400.0       7.6       0.91         1982       2,586.1       7.8       0.93         1983       2,754.2       6.5       0.98         1984       2,934.7       6.6       0.99         1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04  | 1975        | 1,327.3   | 21.4 | 0.84  |
| 1982       2,586.1       7.8       0.93         1983       2,754.2       6.5       0.98         1984       2,934.7       6.6       0.99         1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04  | 1980        | . 2,230.2 | 6.5  | 0.90  |
| 1983       2,754.2       6.5       0.98         1984       2,934.7       6.6       0.99         1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04  | 1981        | 2,400.0   | 7.6  | 0.91  |
| 1984       2,934.7       6.6       0.99         1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04  | 1982        | . 2,586.1 | 7.8  | 0.93  |
| 1985       3,137.2       6.9       0.997         1986       3,343.6       6.6       0.993         1987       3,504.0       5.2       1.04  | 1983        | . 2,754.2 | 6.5  | 0.98  |
| 1986 3,343.6       6.6       0.993         1987 3,504.0       5.2       1.04   | 1984        | . 2,934.7 | 6.6  | 0.99  |
| 1987 3,504.0 5.2 1.04  | 1985        | . 3,137.2 | 6.9  | 0.997 |
| 1001 111111 0,00110  | 1986        | . 3,343.6 | 6.6  | 0.993 |
| 1988 3,652,0 5.2 1.013   | 1987        | . 3,504.0 | 5.2  | 1.04  |
| -,   | 1988        | . 3,652.0 | 5.2  | 1.013 |

SOURCE: Japan Defense Agency, "Defense of Japan, 1988."

for influencing government research, development, and production decisions.

Dual-use technologies that are applied to defense from the commercial sector are becoming increasingly important in defense production strategies, as they are to the overall Japanese economy, In many respects, Japan's defense industry is more significant for its future potential than for its present capacity.

Defense sales dominate certain industrial sectors—over 80 percent of the value of Japanese aircraft production goes to the Self-Defense forces-and play an important role in electronics. Past attempts to develop commercial aircraft have been largely unsuccessful. In the 1980s the government and industry emphasized coproduction and codevelopment with foreign firms, in both military and civilian projects. In addition to collaboration on military aircraft, Japanese firms have entered into joint ventures with the Boeing Co. for the Boeing 7J7 and the V-2500 international aircraft engine consortium led by Rolls-Royce and Pratt & Whitney. Neither venture has been a commercial success, <sup>16</sup> and the Japanese commercial aircraft industry remains small compared to U.S. and Western European counterparts.

Military production has given Japanese firms opportunities to develop airframes and avionics, with less progress in jet engines. Electronics companies in particular have participated in aircraft production to gain an additional outlet for electronics technologies used mainly in civilian products. On the other side, Japanese technology specifically developed for military aircraft, like radar systems and airframe materials, could have potential

<sup>&</sup>lt;sup>12</sup>Most of Japan's procurement is financed decouple special government accounts that allow acquisitions on a deferred payments basis. This practice has generated tremendous obligations for future budgets, but it enables MOF and JDA to constrain any given year's budget to about 1 percent of GNP. 

<sup>13</sup>Boei Nenkan 1989 (Tokyo: Asagumo Shimbunsha, 1989), p. 480. License-produced systems are considered "domestic" products in these figures.

<sup>14</sup>Tbid.

<sup>15</sup> Japan Company Handbook (Tokyo: Toyo Keizai Shimposha, 1988), p. 726; Jieitai Sobi Nenkan (Tokyo: Asagumo Shimbuns ha, 1989), pp. 524, 526.

<sup>&</sup>lt;sup>16</sup>Richard J. Samuels and Benjamin Whipple, 'Defense Production and Industrial Development: The Case of Japanese Aircraft, ' MIT-Japan Science and Technology program Working Paper 88-09, 1988, pp. 3-4.

Table C-2—Top Japanese Defense Contractors, Fiscal Year 1988

|     | Company ranking                | Number of contracts | Amount (billions of yen) | Percent of total |
|-----|--------------------------------|---------------------|--------------------------|------------------|
| 1.  | Mitsubishi Heavy Industries    | 225                 | 364.2                    | 26.1             |
| 2.  | Kawasaki Heavy Industries, Ltd | 130                 | 150.3                    | 10.8             |
| 3.  | Mitsubishi Electric Corp       | 236                 | 100.8                    | 7.2              |
| 4.  | Toshiba Corp                   | 187                 | 83.1                     | 5.9              |
| 5.  | Ishikawajima-Harima Heavy      |                     |                          |                  |
|     | Industries Co., Ltd            | 66                  | 77.4                     | 5.5              |
| 6.  | NEC Corp                       | 365                 | 73.6                     | 5.3              |
| 7.  | Japan Steel Works, Ltd         | 46                  | 31.1                     | 2.2              |
| 8.  | Komatsu, Ltd                   | 69                  | 23.6                     | 1.7              |
| 9.  | Fuji Heavy Industries, Ltd     | 45                  | 22.1                     | 1.6              |
| 0.  | Fujitsu, Ltd                   | 203                 | 16.8                     | 1.2              |
| 1.  | Oki Electric Industry Co., Ltd | 97                  | 16.4                     | 1.2              |
| 2.  | Hitachi, Ltd                   | 71                  | 16.2                     | 1.2              |
| 3.  | Nissan Motor Co,               | 49                  | 15.1                     | 1.1              |
| 4.  | Daikin Industries, Ltd,,       | 66                  | 13.2                     | 0.9              |
| 5.  | Tokyo Keiki Co., Ltd           | 65                  | 11.4                     | 0.8              |
| 6.  | Shimadzu Corp                  | 85                  | 10.1                     | 0.7              |
| 7.  | Nihon Koki, K.K                | 80                  | 9.1                      | 0.6              |
| 8.  | Cosmo Oil Co., Ltd             | 271                 | 8.2                      | 0.6              |
| 19. | Kokusai Electric Co., Ltd      | 169                 | 7.9                      | 0.6              |
| 20. | Japan Radio Co., Ltd           | 137                 | 7.8                      | 0.6              |
|     | Total                          | 2,662               | 1,058.3                  | 75.7             |
|     |                                | •                   | •                        | of ail defens    |
|     |                                |                     |                          | contracts        |

SOURCE: Japan Defense Agency, 1989.

applications to commercial aircraft as well as more advanced military aircraft like the FSX fighter.

In aircraft production the dominant firms are MHI, KHI and Fuji Heavy Industries, Ltd. (FHI). MHI is the prime contractor for the F-15 interceptor and KHI produces the P-3C antisubmarine surveillance aircraft, both of which are the mainstays in this sector, FHI plays the primary role in the production of the AH-1 S antitank helicopter. Japan Aircraft Manufacturing Co., Ltd. (a KHI affiliate) participates in airframe production. Ishikawajima-Harima Heavy Industries Co., Ltd. (IHI) dominates the market for jet engines, producing over 70 percent, while KHI and MHI produce the remainder. KHI also is the prime contractor for the domestically developed T-4 trainer. Care is taken to ensure equitable workshares among these firms regardless of which company acts as the prime contractor on any given project.

Five major shipbuilders supply the Maritime Self-Defense Forces: MHI, IHI; Mitsui Shipbuilding and Engineering Co., Ltd.; Hitachi Zosen Corp.; and Sumitomo Heavy Industries, Ltd. Participation in the production of the U.S. Aegis escort ship offers them new opportunities. Initially, Japanese companies will only construct the hull, while the United States will supply the electronics and weapons systems. However, as noted below, companies can be expected to try to replace imported components with domestic systems as soon as possible.

Missile production represents a growing field for Japanese producers, many of whom produce a number of missile systems for the military. Taking advantage of foreign and domestic inputs, companies have developed systems that replace foreign models and serve as the basis for related products. Representative of that strategy is the ASM-1 antiship missile, which was developed specifically to supplant the U.S.-supplied Harpoon. The Defense Agency is using the technology from this missile in the current development of the SSM-1 surface to ship missile.<sup>17</sup>

An important licensed production program is the Raytheon-MHI Patriot, a surface-to-air missile system whose first unit, a knockdown unit assembled by MHI, was delivered in 1989 to JDA. Subsequent units will be manufactured under license by MHI, with Mitsubishi Electric Corp., NEC Corp., and Toshiba Corp. playing important roles. Nissan Motors' aerospace division is another player to watch in the missile field, not only because of its role in the Patriot program (it builds the missile rocket motors for the program) but also because of its strong role in civilian booster programs and general corporate emphasis in this technology. Missile research, design, and production is proliferating into surface-to-air missiles, air-to-air missiles, antitank missiles, and even cruise missiles. 18 Missiles thus represent a leading edge of Japan's effort to produce wholly domestic models of advanced weapons.

<sup>17</sup> Japan Defense Agency, Defense of Japan 1988 (Tokyo: Japan Times Co., 1988), pp. 138-139.

Is" Japan Uses SSM-1 Expertise to Develop Cruise Missile, " Aviation Week & Space Technology, vol. 128, No. 12., Mar. 21, 1988, p. 59.

In the Japanese defense market, there are rarely clear-cut winners and losers in procurement competitions. Instead, firms losing out on bids as prime contractors for major programs often end up with a significant piece of business as subcontractors. For example, Nissan Motors' aerospace division sought the prime contract for the Patriot program in competition with MHI. Mitsubishi Electric, affiliated with MHI but in this case in competition with that company, favored improvement of the Hawk over acquisition of Patriot. Both firms received significant subcontracting roles when the Patriot business went to MHI. The earlier Hawk competition illustrates this tendency more dramatically. In that case, MELCO was locked in competition with Toshiba that was so intense it ultimately resulted in awarding prime contractor roles to both firms.

#### **Business and Procurement Decisions**

Japanese firms have encouraged the defense buildup over the past decade. Leading companies have pushed for an early realization of total domestic arms production, as evidenced by the stand of MHI in favor of the development of the FSX fighter as a purely Japanese airplane. They also have advocated lifting the ban on arms exports, although they have not pressed this in recent years because of the public's strong antimilitary views.

Defense production firms are well organized to lobby the government and cooperate in multicompany endeavors. Keidanren (the Federation of Economic Organizations, Japan's largest business association), maintains a Defense Production Committee (DPC) with a membership of over 100 manufacturing and financial fins. Virtually without exception, the DPC's chairman is also the chairman of MHI. The Japan Ordnance Association, the Society of Japanese Aerospace Companies, and the Japanese Shipbuilding Industry Association also promote the interests of their members in the defense field. 19 What is notable about the membership of these associations is that many members-Sony and Honda, to name only two--are more commonly associated with commercial and consumer products, not with weapons production. Officials of these groups serve on advisory panels to the

JDA, MITI, and other government agencies. Many of these officials were former government and military officials, who maintain close ties to former colleagues.

# Research and Development

JDA's Technical Research and Development Institute (TRDI) is primarily responsible for defense-related research, but its resources amount to 2.5 percent of the agency's total budget. A budget of 103.2 billion yen (\$715 million) has been proposed for fiscal year 1990, a 12.1 percent increase over fiscal year 1989. The Institute has 1,179 employees and operates under a philosophy of relying on the private sector to the greatest extent possible to generate new technologies. Unlike the United States, where the government conducts a considerable portion of military R&D, the Japanese private sector conducts the bulk of it. The director of TRDI, Ryozo Tsutsui, stated that 81 percent of total Japanese R&D is commercially oriented, implying that the remaining 19 percent is devoted to military applications.<sup>21</sup> If this split is accurate, it suggests that TDRI's annual budgets are only a small portion of total Japanese defense R&D, and that military R&D funding is underestimated.

Japanese companies manage their defense projects in conjunction with research on civilian technology, thus opening opportunities for the development of dual-use technologies. The Defense Agency often facilitates joint research programs or organizes consortia of corporations for research in specific areas. Some of these consortia are oriented toward research into advanced weapons systems. TRDI sometimes carries out preliminary research that it ultimately turns over to the private sector. Recent government pronouncements appear to have upgraded TRDI's role to emphasize research aimed at developing the most advanced weapons system. As the director general of TRDI said: "Our view is that there is no black v. white, military v. civilian technology. All technology is just different shades of gray."

Initiating a project does not assure its success, of course. The 1988 Defense White Paper contains a list of important, independently developed weapons systems, including an antiship missile, a main battle tank, and an

<sup>&</sup>lt;sup>19</sup>For a somewhat dated but still generally accurate examination of business-government interactions in the defense business, see D. Hopper, 'Defense Policy and the Business Community: **The Keidanren** Defense Production Committee, "J. Buck (cd.), *The Modern Japanese Military System* (Beverly Hills, CA: Sage Publishers, 1975), pp. 113-148.

<sup>&</sup>lt;sup>20</sup>Michael Green, "Japan Ups R&D Request in Bid to Boost High-Tech Base," *Defense News*, vol. 5, No. 3, Jan. 15, 1990. One significant aspect of **TRDI's R&D** budgets, like much of Japan's research efforts in general, is its emphasis on applied research. What is particularly important in this case, however, is that applied research translates more often into procurement contracts for **industry** than into basic research.

The fiscal year 1990 **R&D** budget targets four major projects for funding: the **FSX**, testing of a drone jet **aircraft** by the Air SDF, the Ground SDF'S **XATM-4 antitank missile**, and the Maritime **SDF's FCS-3**, afire-control system for destroyer class vessels. Funds will also be allocated for antisubmarine mines and the **Tan-SAM** antiaircraft missile.

<sup>&</sup>lt;sup>21</sup>National Science Foundation has estimated that total Japanese R&D spending amounts to \$39.1 billion for 1987. National Science Foundation, International Science and Technology Data Update 1988 (NSF 89-307), Washington DC, 1988, p. 4.

<sup>22</sup>Japan Defense Agency, "SWIIMXY of 'Defense of Japan 1989," " p. 49.

<sup>&</sup>lt;sup>23</sup>Defense of Japan 1988, op. cit., footnote 18, P-136.

<sup>24&</sup>quot;One on One: Interview with Ryozo Tsutsui, director general, Technical Research and Development Institute," Defense News, vol. 5, No. 8, Feb. 19, 1990, p. 38.

antisubmarine helicopter, that date back to the late 1970s; many are still not completed. Donce initiated, TRDI programs continue to be funded, indicating the government's commitment to domestic development. Indeed, JDA may sometimes delay procurement of cheaper foreign systems until indigenous counterparts are developed.

Japan has embarked on the ambitious development of a new fighter support aircraft, the FSX, to replace outdated F-1s. Although based on the General Dynamics F-16 airframe, the avionics, computer systems, and other electronic components will be supplied entirely by Japanese producers. Additional modifications will be introduced to the airframe and fuselage. U.S. companies will receive a 40 percent share of the development and production work. The costs of the development phase of the program will be well over \$1 billion, high enough that a major increase in Japan's defense budget maybe needed if other important programs are not to be neglected. The entire program is expected to cost at least \$6 billion at current exchange rates.<sup>26</sup>

The role that military aircraft development will play in the future of a commercial aircraft industry remains a subject of debate, which has been heightened in the wake of the FSX controversy. But focusing on the issue of whether technology transferred in military aircraft programs can boost capabilities in the civilian aircraft industry misses the point. Japanese firms seldom seek technological infusions solely to enhance a single sector; rather, imported technology is viewed in the context of its contribution to multiple sectors and the industrial base as a whole. This is especially true for those sectors and technologies identified as key to future economic growth. Thus, to address these issues in isolation as one-to-one relationships between individual industries would underestimate Japanese ambitions and capabilities. This has implications for U.S. policy on international collaboration in defense technology because a sound policy will have to evaluate the implications of these programs beyond their traditional strategic justifications, and even in more comprehensive terms than their impact on isolated sectors of the U.S. economy,

# Force Modernization and Domestic Production

JDA currently is in the fourth year of a 5-year force modernization program that calls for stepped-up procurement of front-line weapons and equipment, especially for Air and Maritime Self Defense Forces.<sup>27</sup> In addition to the

enhancements it will bring to the Japanese military and the sales opportunities it offers Japanese businesses, the plan was important for two policy reasons. First, it was the first defense buildup program to have a status as an official government plan; previous programs were simply planning estimates used to assist the JDA in preparing annual budget requests. As an official plan, the government is obligated to satisfy specific procurement objectives to the greatest degree possible with less regard to cost considerations.

Second, the enhanced status of the plan led to the elimination of the longstanding limit on total defense spending to 1 percent of the country's gross national product. Spending levels, although still hovering around 1 percent, are now determined by the procurement objectives stated explicitly in the 5-year plans. This approach is likely to remain in practice for the foreseeable future.

Major procurement and modernization goals of the current plan are:

Air defense—The Air Self-Defense Force plans to establish and modernize twelve squadrons of fighter interceptors. Eight squadrons of F-15 fighters, totaling 187 aircraft, will replace the obsolete F-104s. Approximately 100 F-4s will make up the remaining four squadrons. Japan will modernize the F-4s by adding newer surface attack equipment and sophisticated air combat electronic equipment and missiles. The Air Self-Defense Force will have 13 E-2C early warning aircraft, and the antiquated Nike-J surface-to-air missile batteries will be replaced with Patriot missiles.

Naval vessels—The destroyer/frigate force will total 62 by the end of the 1986-90 plan. Four existing destroyers and frigates will be outfitted with U.S.-designed Tartar or Sea Sparrow surface-to-air missiles. Two of the destroyers are to be equipped with the U.S. Aegis air defense system. Attack submarines are to total 16 by the end of the 1986-90 @m.

Antisubmarine aircraft—Japan will have a force of 100 P-3Cs, organized into 10 squadrons. The Maritime Self-Defense Force will have a force of nearly 90 antisubmarine helicopters by 1990.<sup>28</sup>

<sup>&#</sup>x27;Ibid., pp. 138-141.

<sup>&</sup>lt;sup>26</sup>Some observers have estimated vastly higher costs, as much as \$2-3 billion for development alone, with an additional \$6-8 billion for production. <sup>27</sup>The plan was introduced by the Nakasone Government for fiscal years 1986-90.

<sup>28</sup> Gary K. Reynolds, Library of Congress, Congressional Research Service "Japan's Military Buildup: Goals and Accomplishments," Report No. 89-68F, 1989, pp. 5-8. This gives an assessment of the current 1986-1990 plan. The defense plans did not set specific goals for improvement of logistics, but the JDA and Prime Minister Nakasone disclosed in May 1983 that the JDA would seek a buildup of ammunition stockpiles to a level adequate for 1 month of combat (*The Daily Yomiuri*, Tokyo, May 23, 1983; Interview with Prime Minister Nakasone on the NHK television network, May 16, 1983).

Since the early 1980s, defense spending has increased by a rate of about 6 percent annually; in real terms, the increase amounted to slightly over 5 percent annually. The defense budget reached a level of about \$31 billion annually by 1989 (at the average 1989 exchange rate). Procurement statistics indicate that Japan is roughly on schedule in authorizing the purchase of these major weapons. These should be on-line in the Self-Defense Forces in the early 1990s.

A debate is in progress within government circles over the next 5-year plan. JDA reportedly sought the introduction of several advanced systems, including refueling tankers, over-the-horizon radar, airborne warning and command systems (AWACS), and small aircraft carriers. This last element is particularly controversial both for its force projection implications and impact on the defense industry. A senior JDA official recently declared, however, that the upcoming buildup program would not include any plans for it.

Following that declaration, there have been efforts to reduce the normal time period of the buildup program from 5 to 3 years. Bureaucrats responsible for preparing and negotiating the budget object to that proposal, insisting that the 3 full years are required to get agreement of relevant ministries to 5-year program goals. Proponents are said to be pressing for the 3-year approach to allow an earlier opportunity to reintroduce the more controversial proposals rejected for the coming plan.

# Constraints on Domestic Arms Production

Since Japan's defeat in World War II, it has been wrapped in a web of constraints which help explain its current defense policy.

The first is the widespread pacifist sentiment which grew out of defeat in 1945. These sentiments are embodied in Article 9 of the 1947 Constitution, the now-famous "no-war" clause. Article 9 reads as follows:

Aspiring sincerely to an international peace based on justice and order, the Japanese people forever renounce war as a sovereign right of the nation and the threat or use of force as a means of settling international disputes.

In order to accomplish the aim of the preceding paragraph, land, sea, and air forces, as well as other war potential, will never be maintained. The right of belligerency of the state will not be recognized.

It is important to note that these two paragraphs are the only bona fide constitutional restrictions on Japan's defense. The key to present day defense policies lies in understanding the government interpretations of Article 9 in light of domestic public support and the international climate. Very few of the policies constructed on the foundation of Article 9 have been legislated since the 1954 laws establishing the Self-Defense Forces and the Japan Defense Agency were passed; rather, they result from a series of cabinet decisions over the last 30 years.

Government interpretations of Article 9 have led to further restrictions on Japan's military that have implications for its procurement decisions and defense industrial strategies. These include the prohibition of conscription (a cabinet policy based on constitutional prohibitions of involuntary servitude); restrictions on offensive weapons, a flexible policy subject to interpretation by successive governments; prohibition of participation in collective security agreements, a policy stance based on Article 9 with some legislative basis in the SDF and JDA establishment laws; and, restrictions on overseas troop deployments, a statutory restriction found in the SDF establishment law. Equally famous are Japan's non-nuclear principles-the restrictions against possessing, manufacturing, or 'introducing' nuclear weapons-issued by the Sato government in 1968. The government also vows that it will observe only peaceful uses for space. Japan's participation in the Strategic Defense Initiative is considered consistent with this policy.

A historical controversy still lingers over the origins of Article 9, but there is no doubt that pacifist sentiment in Japan is strongly embraced today, even while recognizing the potential military threat posed by the Soviet Union. A nationwide poll on security issues in July 1988 by the Yomiuri Shimbun, Japan's largest daily newspaper, revealed the perception that most Japanese perceived a genuine security threat along with enduring pacifism. Exactly half of the respondents in the poll, published July 12, 1988, felt that there was some or a great likelihood of Japan becoming involved in a military conflict in the near future. That concern, however, did not translate into a strong sense that Japanese must defend their country in the event of an attack. Only 3.6 percent said they would join the Self-Defense Forces in that event, with 28.3 percent declaring they would "support' the SDF. Passive resistance was endorsed by 23.0 percent and 22.7 percent declared they would "flee to a safe location." Under those circumstances, it is not surprising that over 75 percent of the respondents in a subsequent Yomiuri poll judged the security treaty with the United States, which obligates the United States to defend Japan in the event of an attack, as being of service to 'some extent or a' great extent' to Japan.

<sup>&</sup>lt;sup>29</sup>Karl D. Jackson, Deputy Assistant Secretary of Defense (East Asia and Pacific Affairs), testimony at hearings before the Subcommittee on Asian and Pacific Affairs of the House Committee on Foreign Affairs, Oct. 13, 1988.

<sup>30</sup> Library of Congress, Congressional Research Service, "Japan's Military Buildup: Goals and Accomplishments," Jan.27, 1989, pp. 5-10.

<sup>31 &</sup>quot;Yomiuri Shimbun Nationwide Poll: 67% Favor Current Levels for Self-Defense Forces," *Yomiuri Shimbun*, July 12, 1988, international edition, p. 8,; Yomiuri Shimbun Nationwide Poll on Security Treaty: Expectations on U.S. Coming to Assistance Decline," *Yomiuri Shimbun*, Aug. 1, 1988, Tokyo metropolitan evening edition, p. 6.

The second major constraint on defense policy is the **primacy of economic development over rearmament.**This is the so-called Yoshida doctrine, and it remains a fundamental tenant of Japanese economic and security policies. However, lucrative defense contracts, like those in other nations, have been justified for their economic benefits in a manner that is consistent with that doctrine.

A third point is **Japanese reliance on the United States for defense. The** U.S.-Japan mutual security treaty is a fundamental element of Japan's security policies. Japan's basic defense strategy is to possess sufficient capability to resist a limited invasion until the United States could shift its Pacific forces to support Japan. This strategy and the treaty that provides the rationale for its implementation remain important elements of Japan's overall security posture, particularly for Foreign Ministry officials.

During the Nixon administration, both industry and government in Japan questioned the reliability of the United States, in the context of its withdrawal from Vietnam and Southeast Asia, especially as the Soviet military buildup became more visible. Although the war in Vietnam was not popular in Japan, support by the government was viewed as the price for stable bilateral relations, freedom from economic frictions, and continued viability of the security treaty. When the United States indicated its willingness to reduce support for the South Vietnam government, the inevitable question arose in Japan of whether it would be next, encouraging thoughts of greater self-sufficiency in defense.<sup>33</sup>

Recent official statements evidence concern regarding the ability of the United States to uphold its end of the bilateral security relationship. The 1988 defense white paper notes that "although the United States, backed by its outstanding military and economic strength, continues to play the major role in the field of international politics, no one can deny the fact that its position in the economic field is comparatively declining in recent years." Given

that there also is a strong economic component in the Japanese concept of security, it is not unreasonable to conclude that policymakers are concerned that the relative economic decline of the United States could result in a decline of the United States as a security guarantor as well.

Finally, there are differing views on the external threat, The 1976 National Defense Outline (NDO), the basic position paper governing Japan's procurement and defense strategies, was drafted under the assumption that detente would continue between the United States and the Soviet Union. The NDO was never amended to reflect the more tense relations between Western nations (including Japan) and the U.S.S.R. during the late 1970s and early 1980s, even with the Afghanistan invasion and the KAL 007 incident. Government officials have since grown less reluctant to detail a specific Soviet threat.

Willingness to identify the Soviet Union as the principal security threat was reflected in part by an expansion of Japanese roles and missions, beginning in the late 1970s. For example, the Carter Administration formalized defense guidelines with Japan in November 1978. These called for greater coordination between U.S. and Japanese military commands, joint planning for the defense of Japan in case of external attack, stepped-up joint military exercises, and mutual logistical support.<sup>36</sup>

Following visits by then-Secretary of Defense Caspar Weinberger to Japan, former Prime Minister Zenko Suzuki agreed in May 1981 to assume responsibility for defending the sea-lanes approaching Japan to a distance of 1,000 nautical miles, a zone encompassing the waters between Japan and the Philippines, swinging east from the Philippines to Guam. U.S. and Japanese officials subsequently completed a joint sea-lane defense plan for Japanese waters in December 1986. While this plan remains classified, U.S. officials in 1981 had proposed sea control missions for Japanese naval and air forces as well as the capability to close off three critical straits around

<sup>&</sup>lt;sup>32</sup>One respected Foreign Ministry official, former ambassador to Saudi Arabia Hisahiko Okazaki, likens this stance to a John Wayne Western in which the cavalry rides to the rescue of settlers beleaguered by hostile Indians. For a further elaboration of Okazaki's perspective, see "The Restructuring of the U.S.-Japan Alliance," *Bungei Shunju*, July 1988.

<sup>&</sup>lt;sup>33</sup>For a thorough examination of Japan's ambivalent attitudes toward the Vietnam war, see Thomas R.H. Havens, *Fire Across the Sea: The Vietnam War and Japan, 1965-75* (Princeton, NJ: Princeton University Press, 1987).

<sup>34</sup>The National Defense ~@ makes the following assumptions about the international situation and the necessity for self-defense program:

The major power blocs will continue a dialogue toward improving relations and reducing the threat of nuclear war, despite this trend, regional instability will remain and the international situation will continue to be fluid; an equilibrium exists among the United States, China, and the Soviet Union in the area around Japan; there is little possibility of a full-scale conflict between East and West due to the military balance, including the nuclear balance; while the possibility of regional conflict cannot be dismissed, the U.S.-Japan security arrangement helps maintain international stability and prevents full-scale aggression against Japan.

Defense of Japan 1976, pp. 3-7.

<sup>&</sup>lt;sup>35</sup>Recent white papers have made a strong case in establishing the basis of the Soviet threat and, thus, the justification of continued defense spending increases. See *Defense of Japan 1987*, pp. 35-37; *Defense of Japan 1988*, pp. 33-43; "Warning Shots Fired on Soviet Bomber,' Kyodo News Service, Dec. 9, 1987.

<sup>&</sup>lt;sup>36</sup>U.S. Congress, Senate Committee on Armed Services, "United States-Japan Security Relationship-The Key to East Asian Security and Stability," Report of the Pacific Study Group, 96th Cong., 1st sess. (Washington DC: U.S. Government Printing office, 1979), pp. 22-27.

<sup>37</sup>Asahi Shimbun Tokyo, Mar. 28, 1981, and The London Times, March 31, 1981. See also the statement by Assistant Secretary of Defense Frock West before the House Subcommittee on Asian and Pacific Affairs, Mar. 1, 1982.

the country, Tsushima, Tsugaru, and Soya, to potential aggressors.  $^{^{38}}$ 

At the Japan-U.S. Security Conference in Hawaii in June 1981, U.S. officials put forth additional force structure proposals. These called for revisions in several components of Japan's 1976 defense program. The key elements were:

- the addition of 4 squadrons of F-15 fighters to the 10 squadrons of modernized fighters targeted in the 1976 defense program;
- an increase in Japan's force of destroyers and frigates to 70 vessels with substantial modernization in air defense and antisubmarinee capabilities;
- an increase in the number of attack submarines to 25 from Japan's target of 16;

- the establishment of an antisubmarine aircraft force of 125 P-3Cs, the main antisubmarine aircraft of the U.S. Navy; and
- . the establishment of a 3-month supply of ammunition.

The U.S. Secretary of Defense indicated to the Japanese in March 1982 that Japan should attain this kind of force structure by 1990. He declared that such a buildup would "require substantial improvements in military capabilities and increases in defense spending substantially greater than the current annual growth rate." U.S. officials who accompanied the Secretary asserted to reporters that Japanese defense expenditures would have to increase at least 10 percent annually in real terms in order to develop these assets.<sup>39</sup>

<sup>38</sup>West statement, Mar. 1, 1982, ibid.

<sup>39</sup>Richard Halloran, www.s. Aide to Stress Japan Arrew Quella Smess, Mar. 27, 1982, p. A-3.