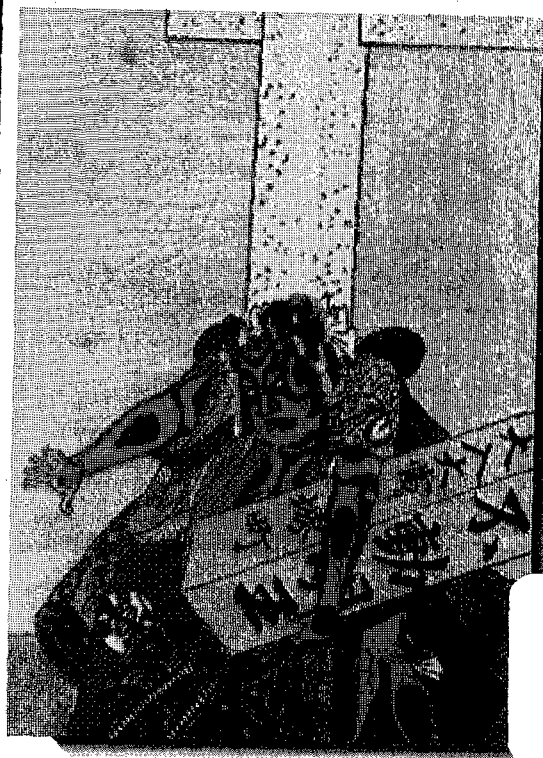


THE WARY WARRIORS



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Future Directions in Japanese Security Policies

Norman D. Levin ♦ Mark Lorell ♦ Arthur Alexander

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Future Directions in Japanese Security Policies

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Norman D. Levin

Mark Lorell

Arthur Alexander

MR-101-AF

Prepared for the
United States Air Force

RAND

Project AIR FORCE

PREFACE

This report presents the findings of a RAND study that assessed future directions in Japanese security policies. It is based on research conducted in 1989 and 1990, which included extensive interviews in Japan with government officials, senior officers in the Self-Defense Forces, and leading members of private industry. A draft report was written in the spring/summer of 1991 and published in September of that year. When the draft was revised in the spring of 1992 to produce the current document, modest changes were made to reflect the dramatic events taking place in the world—particularly the disintegration of the Soviet Union and the war in the Persian Gulf. It was not possible, however, to conduct fresh interviews or systematically assess the implications of those events for Japanese perceptions and security policies.

The research for this report was sponsored by the U.S. Air Force under the auspices of the National Security Strategies Program of Project AIR FORCE, one of RAND's federally funded research and development centers. The findings are intended to be of assistance to Air Force officers and planners concerned with the future strategic environment in the Asia/Pacific region and defense cooperation between Japan and the U.S. They should also be of interest to scholars, analysts, and policymakers concerned with Japanese politics, security policies, defense technologies, and industrial policies, and with U.S.-Japan relations.

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SUMMARY

This report describes our assessment of how changes in the domestic, regional, and international environments are likely to affect future Japanese security policies and defense cooperation between Japan and the U.S. We focused on two key areas in making our assessment: the broad policy trends in Japan and Japanese perspectives on evolving regional and global developments, and the force structure and operational capabilities of Japan's Self-Defense Forces (SDF). We also examined Japanese defense resource and procurement trends with a view to assessing how Japanese technological developments and industrial policy decisions are likely to affect the Japanese force posture. As a final step, we arrived at what we see as the most likely prospect for Japanese security policies over the coming decade, the main alternatives to this most likely direction, and the implications of all these directions for the U.S. Air Force and, more broadly, the U.S. Our findings call into question the widespread view that Japan will inevitably move toward major rearmament and an independent military posture.

Indeed, current trends suggest that the most likely prospect for Japan (our baseline projection) is a continuation of its *general* policy direction. The fact is that Japan's general approach has been quite successful. The Japanese have gradually built up a significant self-defense capability—i.e., a capability whose purpose is not to threaten Japan's neighbors, but to provide for the defense of Japanese territory and immediately surrounding areas against small-scale acts of aggression—in the face of strong domestic and regional opposition to Japanese "rearmament." They have provided a foundation and infrastructure for further military expansion should international

conditions make it necessary and domestic conditions allow it to take place. And they have minimized the economic burdens that these efforts entail while ensuring continued U.S. involvement in Japan's defense. The success of this general policy reinforces bureaucratic inertia and puts the burden of proof on those who argue that major changes are required to meet Japanese national interests.

Japan's fundamental conservatism also bolsters the prospects for continuity. Faced with significantly increased international uncertainties and domestic political, economic, and social difficulties, Japanese leaders will move cautiously. They will keep Japan's basic security framework, including the Constitutional renunciation of war "as a sovereign right of the nation" and ban on the maintenance of "war potential." They will also keep the host of policies adopted over the last three-and-a-half decades that are designed to ensure a continued, but gradual and fundamentally defensive, military buildup. Japanese threat perceptions are likely to move away from the singular preoccupation with Russia toward a more variegated focus on dangers *within* Asia, particularly those related to the Korean peninsula situation and China's future strategic direction. The multitude of such regional dangers, coupled with growing uncertainties about the long-term U.S. military presence and continuing strains in Russia-Japan relations, will prevent a free fall in Japanese defense spending.

The military capabilities of the SDF will thus continue to improve incrementally, although at a reduced rate compared to that of the past decade because of slower economic growth, downward political pressures on defense spending, and increased priority on manpower, supplies, and logistics. There will not, however, be major changes in the force structure's size or overall capabilities. The SDF will remain uniquely defensive in orientation, relatively unbalanced in terms of force structure, and deficient in several critical operational and support areas. Their ability to take over U.S. military roles will remain highly problematic.

At the same time, indigenous R&D and domestic production will almost surely receive greater emphasis, but the rapid growth in procurement expenditures will slow over the course of the decade. In the absence of major changes, Japan will not develop a major indigenous arms production capacity, certainly not one that would rule out

the need for the U.S. as a major supplier of military systems. If Japan does try to substitute its own systems much beyond current levels, mission capabilities will almost surely suffer. In short, efforts to improve Japan's indigenous defense capabilities will continue, but they will be constrained by political, operational, technical, and resource limitations.

Externally, Japan will seek to maintain close military relations with the U.S. Most Japanese understand that, given their present circumstances, they cannot cope in the world without the U.S. defense commitment. They value close security ties and want U.S. engagement. For this reason, they will continue to support the maintenance of U.S. military bases in Japan (should the U.S. decide to keep them). They will also continue to participate in combined planning and training exercises, which offer benefits to Japan quite apart from just serving the broader, strategic objectives. Japanese leaders will seek a more activist set of foreign policies (especially toward Asia), but they will not seek abrogation of the U.S.-Japan Security Treaty or an independent military role overseas.

Whether the current debate over Japanese participation in international peacekeeping operations will turn into a watershed remains to be seen. At a minimum, Japan will establish some embryonic group that may evolve over time into an "after-hostilities-end" kind of peacekeeping organization. Such an organization would not have major implications for the Japanese force structure, but it would be one manifestation of Japan's continuing desire to contribute to regional and global security as a "member of the West."

Despite the Japanese government's efforts to maintain close military ties with the U.S., however, future bilateral defense relations will face a much rockier road. U.S. military activities will encounter increased constraints, for example, with problem exercises such as night landings and live target practice being phased out or moved elsewhere over the course of the 1990s. Exercises seen as offensive, rather than defensive, will in general become increasingly vulnerable politically. And further U.S.-Japan military integration will be challenged by both political and budgetary constraints, while technology transfers become increasingly hindered by intensified bilateral economic competition.

All of these difficulties will take place in the context of Japan's seeking greater equality in its relations with the U.S. U.S. actions perceived as manifestations of American unilateralism—such as the “Super 301” policies (which mandate unilateral American restrictions on Japanese imports in response to what are seen as “unfair” Japanese trading practices) in the economic sphere, and the lack of consultation prior to demands for Japanese financial contributions to Desert Storm in the political-military sphere—will be increasingly resented and resisted. Japanese desires for more-equal treatment can be accommodated within the framework of a continuing U.S.-Japan security relationship, but probably only at a higher level of strain and acrimony. If economic tensions get out of hand, or if the more disturbing political and attitudinal trends in the U.S. and Japan become dominant, an ever-widening gap could develop between close military-to-military ties and broader U.S.-Japan relations. At worst, there could be a rupture in the bilateral relationship.

Barring such a development, however, the expectation that Japan will “inevitably” move toward major rearmament and an independent defense posture appears questionable at best. The results of our analysis suggest that Japan will lack both the will and the capabilities needed to achieve such a status for at least the rest of this decade. This is not to suggest that Japan lacks the *wherewithal* to become a major military power should it decide to do so. But, absent major changes, its political *infrastructure* and military *capabilities* are unlikely to give it this status by the end of the decade. Indeed, the 1990s may well represent more of an effort to preserve the gains of the 1980s than to move in any radically new directions.

As major alternatives to this baseline projection of where Japan is most likely headed—i.e., toward a continued relationship with the U.S., but one that is troubled—we identified three other directions based on historic and current trends: toward expanded Japanese cooperation with the U.S. in regional and global security (*new global partnership*), toward a “nondominationist,” “omnidirectional” set of policies (*detente defense*), and toward a more “stridently nationalistic” orientation (*autonomous defense*). The first two would see Japan adhere, in general, to its “basic defense capability” orientation, which has characterized Japanese defense policies for the past 15 years. Only the autonomous defense alternative would see significant enhancements in Japan's force structure and operational ca-

pabilities. We examined all of the major directions and assessed the military capabilities Japan would be likely to end up possessing should it choose to move in one of them.

Our findings have a number of implications for the U.S. Air Force and, more broadly, U.S. policy:

- At a minimum, *the findings raise questions about the validity of key U.S. regional defense planning assumptions.* In three out of what we regard as the four most likely future Japanese directions (the baseline projection of a continuing but troubled partnership, the new global partnership, and detente defense), Japan will probably lack the capabilities needed to achieve the goals it sets for itself in extended air and sea-lane defense. Other assumptions on which regional defense planning is predicated will also need to be revised, as will those underpinning U.S. global defense planning more broadly.
- By the same token, the only direction that will give Japan the capabilities needed to take over significant U.S. roles is autonomous defense. Whether movement in this direction would be in U.S. interests, however, is highly problematic. On the other hand, *outside of a Russian context*, Japan's capabilities in three of the most likely projections (all but detente defense) should be sufficient for handling any direct conventional threat to Japan proper. Given recent trends in the former Soviet Union, *the order of magnitude of Japanese capabilities is thus probably about right, which suggests that the U.S. should emphasize greater integration, interoperability, and sustainability rather than major quantitative increases in Japan's force structure and military power.*
- Japan's increasing emphasis on domestic production and the increasing U.S. interest in controlling key technologies will continue to create problems for both Japan and the U.S. Japan must either use older, lower-performance systems of U.S. design or develop its own systems at additional cost and probably reduced capability. Politically, the U.S. technology controls (coupled with asymmetric treatment of Japan by the U.S.) raise questions about whether Japan can count on the U.S. for advanced systems and technologies and provide encouragement for those Japanese who are advocating the development of

domestic systems. For the U.S., the increased Japanese emphasis on domestic production could pose new standardization and interoperability problems while diminishing the U.S. cost savings formerly enjoyed as a result of Japanese equipment purchases. Systems fielded by the U.S., moreover, could end up lacking in capability, either because they do not incorporate the best technologies and component designs available in the world (especially in Japan) or because they do not take advantage of efficient production processes mastered by Japan's civilian industries. *Notwithstanding the difficulties involved, both sides would stand to gain—especially in a period of declining procurement budgets—from any progress that can be made toward achieving a meaningful two-way technological exchange.*

- At a more thematic level, *the U.S. needs to factor into its thinking about Japan the likelihood of a major drawdown by the superpowers from Asia.* Underlying trends suggest that Russian and American force reductions already under way may be considerably more far reaching than generally expected. The outcome could be a region that is free of a major superpower military presence for the first time since the Korean War. What Japan would do in such an environment could contribute to a power vacuum within the region or, at the other end of the spectrum, help generate a new long-term threat to U.S. interests. For either contingency, close U.S.-Japan military ties are critical to regional stability.
- More broadly, *the U.S. will have to pay more than usual attention to the U.S.-Japan relationship to keep it going through the decade.* Most Japanese continue to see this relationship as the key to regional security, as well as to regional economic progress. The Bush administration has reaffirmed its own awareness of the centrality of the bilateral relationship to U.S. regional policies. But the ground is shifting as attitudes toward the alliance undergo significant changes in both Japan and the U.S. Many Japanese and Americans are coming to doubt the value of enhanced cooperation, and each group is growing more suspicious of the other's motives. As the U.S. looks to the future, the external and domestic political environments are likely to be far less tolerant than they were in the latter 1970s and the 1980s. The task will be to draw Japan into a larger cooperative

relationship while demonstrating clearly to the public in both countries the benefits of continued close relations.

- Finally, *the U.S. needs to remember its own importance*. The world has clearly entered an era of historic transformation. The dramatic changes in the former Soviet Union and Eastern Europe have altered not only the global power equation, but the structure of international relations. Political relationships are beginning to change in Asia as well, as countries begin to jockey for position in the new order. But one thing that has not changed is the centrality of the U.S. to Japanese calculations. Indeed, positing a radically different kind of Japan presupposes a radically different kind of U.S.-Japan relationship. In this sense, while it is certainly true that Japan's future direction will be the product of many influences, U.S. policies and the state of U.S.-Japan relations are likely to constitute the single most important determinant. As the U.S. plans its responses to the emerging world order, it needs to keep this importance firmly in mind.

ACKNOWLEDGMENTS

Over the course of this research, which involved two field trips to Japan and extensive interviewing in both Japan and the U.S., many individuals both inside and outside the two governments contributed their time and insights to improve our understanding. Although they are too numerous to list individually, we hope they will recognize their contributions in these pages.

We do want to express a particular thank you, however, to Col. Phil Gardner (ret.) and Col. Karl Widemayer. Their active support and assistance were critical to the initiation of this project and immeasurably helpful to bringing it to fruition. We also want to thank Chris Bowie, David Friedman, and Frank Fukuyama for their exceptionally thoughtful and helpful reviews of the draft of this report. Addressing all their useful comments and suggestions was a formidable challenge and highlights the breadth of their contributions.

Above all, we want to thank David Ochmanek for his many substantive and procedural contributions. David's management of the program in which this project was conducted reflects his consistently strong leadership, wise counsel, and collegial support—all of which we benefitted from and greatly appreciated.

We alone, of course, are responsible for any errors of fact or interpretation.

INITIALISMS AND ABBREVIATIONS

AAW	anti-air warfare
ACT	air combat training
AEW	aerial early warning
AFV	armored fighting vehicles
AI	air interdiction
AIFV	armored infantry fighting vehicles
ALCM	air-launched cruise missile
APC	armored personnel carrier
ASDF	Air Self-Defense Force
ASM	air-to-surface missile
ASW	antisubmarine warfare
AWACS	airborne warning and control system
BAI	battlefield air interdiction
BVR	beyond visual range
C3	command, control, and communications
CAS	close air support
CIWS	close-in weapon system
CSIS	Center for Strategic and International Studies
DACT	dissimilar air combat training
DATO	defensive air tasking order
DCA	defensive counter-air
DSP	Democratic Socialist Party
ECM	electronic countermeasures
ELINT	electronic intelligence
EW	electronic warfare
FEMD	Far East Military District
FY	fiscal year
GNP	gross national product

GSDf	Ground Self-Defense Force
HAS	hardened aircraft shelter
HUD	head-up display
IFF	identification, friend or foe
INF	Intermediate-Range Nuclear Forces
INS	inertial navigation system
IOC	initial operating capability
IR	infrared
JDA	Defense Agency (Japan)
JIIA	Japan Institute of International Affairs
JSP	Japan Socialist Party
LDP	Liberal-Democratic Party
MBT	main battle tank
MCM	mine countermeasures
MHI	Mitsubishi Heavy Industry
MICV	mechanized infantry combat vehicle
MITI	Ministry of International Trade and Industry
MLRS	multiple-launch rocket system
MOB	main operating base
MPA	maritime patrol aircraft
MSDF	Maritime Self-Defense Force
NATO	North Atlantic Treaty Organization
NEC	Nippon Electric Company
OCA	offensive counter-air
OECD	Organization for Economic Cooperation and Development
OTH-B	over-the-horizon backscatter
PRC	People's Republic of China
R&D	research and development
RWR	radar warning receiver
S3	Sea Shore Strike
SAM	surface-to-air missile
SDF	Self-Defense Forces
SLEP	service life extension program
SLOC	sea line of communication
SPAAG	self-propelled anti-aircraft gun
SSBN	strategic nuclear ballistic missile submarine
SSM	surface-to-surface missile
SSN	nuclear attack submarine
START	Strategic Arms Reduction Talks

TASMO	tactical support of maritime operations
TRDI	Technical Research and Development Institute
UK	United Kingdom
UN	United Nations
USIA	United States Information Agency
VCR	video cassette recorder
VSTOL	vertical/short takeoff and landing

Chapter One

INTRODUCTION

This study grew out of a series of changes that occurred over the past several years in Japanese policies, in Japanese and American public perceptions, and in the wider international environment. Together with significantly heightened tensions in U.S.-Japan economic relations, these changes spawned a growing, if somewhat inchoate, concern in the U.S. that Japan will inevitably move toward major rearmament and an independent military posture. Japan's strong economic and technological capabilities reinforced this concern and bolstered the growing awareness that Japanese actions in the defense area could affect U.S. interests.¹ This project sought to assess how the changes in the domestic, regional, and international environments are likely to affect future Japanese security policies and defense cooperation between Japan and the United States.

Our research focused on two key areas: broad policy trends in Japan and Japanese perspectives on evolving regional and global developments, and the force structure and operational capabilities of Japan's Self-Defense Forces (SDF). We also examined Japanese defense resource and procurement trends to determine how Japanese technological developments and industrial policy decisions would be likely

¹Most policymakers and many specialists dealing with Japan have always doubted the seemingly growing (at least for a time) conventional wisdom that Japan would become a truly world-class power with military capabilities to match. And faced with Japan's reaction to the Persian Gulf crisis, even many nonspecialists came to sense some of the obstacles to such a development. But the concern, and in certain circles conviction, that trends in Japan and in U.S.-Japan relations are likely to produce this development was very strong in the public U.S. debate in 1989, at the time this study was undertaken, and it still remains a factor in public American thinking about Japan.

to affect Japan's force posture. The purpose was to assess not just the question of *will* but of Japan's actual *capabilities*.

This report presents our findings with respect to three research issues: the central question of where Japan is most likely headed over the course of the 1990s, the main alternatives to this most likely direction, and the implications of all directions for the U.S. Air Force and the U.S. more broadly.

This chapter examines the internal environment affecting Japanese security policies. We begin by describing the domestic debate on defense in postwar Japan and trends over the past two decades. We then analyze elements of both external and internal change and continuity. The chapter concludes with an assessment of where the Japanese security establishment is today and what its expectations are concerning the future.

DEFENSE POLICY IN JAPAN: THE HISTORIC DEBATE

The Japanese defense debate in the postwar period has peaked at roughly ten-year intervals: in the late 1950s over revision of the 1951 U.S.-Japan Security Treaty, in the late 1960s and early 1970s over the Fourth Long-Term Defense Buildup Plan, and in the late 1970s and early 1980s over the continued viability of Japan's broad defense posture. Out of each historical peak came a series of Japanese government decisions or policies that dampened debate and laid a course for the ensuing decade.¹ Running through both peaks and valleys, however, have been two fundamental underlying issues: how far Japan should go in building up its indigenous military capabilities, and the kind of defense relationship Japan should have with the U.S.

¹For details, see Norman D. Levin, "Japan's Defense Policy: The Internal Debate," in Harry Kendall and Clara Joewono (eds.), *Japan, ASEAN, and the United States* (University of California, Berkeley, 1991), pp. 75-91. For a Japanese version of the debate, see Kobun Ito, "Sengo nihon no kokuboron o kangaeru," *Shinboei Ronshu*, January 1988, pp. 1-9; and "Sengo nihon no anzen hoshoron," *Boei Nenkan*, 1988 (Boei Nenkan Kankokai, 1988), pp. 53-112.

Four broad schools of thought have dominated Japanese debate over these issues.² The first is represented by proponents of "unarmed neutrality." This school of thought is associated with the leftist Japan Socialist Party (JSP) and leading Japanese intellectuals and trade union organizations. These individuals are distrustful of both the Japanese military, which they regard as responsible for Japan's pre-war expansionism and ultimate catastrophic defeat in World War II, and the U.S., which they see as using Japan to further America's global ambitions. They see no external military threat to Japan's security. Indeed, their biggest fear is of the U.S. "dragging" Japan into an unwanted war in pursuit of its strategic objectives. With this orientation, they strongly oppose any change in Japan's Constitution (widely characterized as the "peace constitution") that would alter that document's formal proscription of Japan's participation in war or maintenance of military forces for war purposes, and they seek to reduce the SDF to an "unarmed" or "lightly armed" territorial defense guard sufficient to maintain internal security. They also seek the abrogation of the U.S.-Japan Security Treaty, the adoption of an absolutely "neutral" foreign policy posture to avoid involvement in external disputes, and the promotion of global disarmament.

The second school of thought consists of those who advocate Japanese "independence." This school constitutes Japan's "Gaullists," a historically small but vocal group of people on the far right of the political spectrum who believe that full rearmament is a matter of national pride and, given the uncertainties of long-term U.S. support, national survival. Those of this persuasion regard Russia as Japan's permanent enemy. They also see China as a long-term potential threat, as well as Japan's leading rival for influence in Asia. Critical of the alleged Constitutional affronts to Japan's "sovereignty" and the objective political impediments to rearmament, Japan's Gaullists seek a revision of the Constitution and elimination of the full range of governmental constraints on Japan's military buildup. They also

²The categorization used here is intentionally oriented toward policy. For alternative ways of characterizing the debate, see Tetsuya Kataoka and Ramon Myers, *Defending an Economic Superpower—Reassessing the U.S.-Japan Security Alliance* (Westview Press, 1989), pp. 25–38; Mike Mochizuki, "Japan's Search for Strategy," *International Security*, Winter 1983–84, pp. 152–179; and Kenneth Pyle, "The Future of Japanese Nationality: An Essay in Contemporary History," *Journal of Japanese Studies*, Vol. 8, No. 2, 1982, pp. 223–263.

seek revision of the U.S.-Japan Security Treaty. They recognize the importance of Japan's relationship with the U.S. but believe the treaty arrangement inherently relegates Japan to a subordinate role and hinders Japan's effort to assume its "rightful" place as an equal of the major powers.

Although these two schools of thought effectively bound the range of views in Japan, two other schools, both in the middle, have conducted the debate that has been important in *policy* terms over the past two decades. One is represented by proponents of "basic defense capability" (*kibanteki boeiryoku*), a concept closely associated with the late Takuya Kubo, who was a key figure throughout the 1970s in Japan's defense establishment. In its basic policy orientation, however, this school may be regarded as an extension of the conservative mainstream in Japan since the days of Prime Minister Yoshida in the 1950s. Members believe that the nature of the international environment precludes any large-scale threat to Japan and that Japan thus need develop only a "minimal" self-defense capability in peacetime that is sufficient to deal with acts of "limited and small-scale aggression."³ Given this self-limitation and the inherent uncertainties of international politics, however, they also regard the U.S.-Japan Security Treaty arrangement as absolutely critical to Japanese security. In light of U.S. budgetary pressures and broader global trends, they urge expanded Japanese burden-sharing efforts and a strengthening of Japan's defense ties with the U.S.

While in general following the broad Yoshida line, proponents of basic defense capability represent an advance in two important respects: (1) they postulate for the first time (albeit in vague and abstract terms) a certain minimum level of defense capability and responsibility that Japan needs to take on itself rather than simply relying on the U.S. to provide all of Japan's external security, and (2) they accept the need for expanded *Japanese* efforts toward preserving the U.S.-Japan security alliance. The Japanese government adopted this

³Takuya Kubo, *Kokuboron* (PHP Kenkyujo, 1979), pp. 192-218; and "Boei hakusho atogaki—shiken," *Kokubo*, August 1976. For further background on this school of thought, see Hideo Otake, *Nihon no Boei to Kokunai Seiji* (Mitsui Shobo, 1983), pp. 113-144; Katsuya Hirose, *Kanryo to Gunjin* (Iwanami Shoten, 1989), pp. 125-205; and Masataka Kosaka, "Gendai no kihon mondai to nihon no boei," *Kokubo*, January 1976, pp. 8-50.

school of thought as its official policy in 1976 in the National Defense Program Outline (*Boei Keikaku no Taiko*, or *Taiko* for short). Together with the Guidelines on U.S.-Japan Defense Cooperation promulgated in 1978, which provided for expanded Japanese participation in military activities with the U.S., the *Taiko* serves as the basic document structuring Japan's defense policy today.⁴

The other school of thought that has been important to policymaking is represented by advocates of "autonomous defense." Members of this school share with the proponents of basic defense capability the belief that close U.S.-Japan security relations are critical for Japan's security: unlike advocates of the first two schools, independence and unarmed neutrality, they want to maintain the U.S.-Japan Security Treaty arrangements.⁵ They disagree with the proponents of basic defense capability, however, on three key points.

First, as a matter of philosophy, they believe that the basic defense capability approach has it all backward. Instead of identifying some imaginary level of conflict at the lower end of the conceptual spectrum and relying on the U.S. for any conflict that exceeds that level, they argue that Japan should give *primary* emphasis to its own defense efforts and *supplement* these with U.S. assistance. Second, they disagree on the seriousness of Japan's geostrategic situation. Noting the improvements the Russians have made in their military forces in the Far East over the 1970s and 1980s, the uncertainties connected with the Korean peninsula situation and China's future evolution, and the general trend toward a reduced U.S. military presence in Asia, they reject the idea of limited and small-scale aggression as the target for Japan's rearmament and call for a more rapid and extensive defense buildup. Finally, they disagree on how to calculate Japanese defense requirements. They believe (particularly those within the Japanese military services) that the use of assumptions about international developments and the intentions of neighboring nations as the basis for estimating Japan's defense needs is

⁴For more information on the *Taiko* and Japanese defense policy, see Norman D. Levin, *Japan's Changing Defense Posture*, N-2739-OSD (RAND, June 1988), especially pp. 8-23.

⁵In view of this belief, the English term, *autonomous*, is rather misleading. In Japanese, the word used is *jishu*, which is a somewhat emotive term connoting primary reliance on oneself.

militarily illogical and potentially dangerous. Intentions can change more rapidly than can procurement possibilities, they argue, and Japan should build up its forces as required to deal with the military *capabilities* of potential antagonists.⁶

The general trend in Japanese defense policies over the past two decades has been as depicted in Figure 1. Japan has significantly improved the capabilities of the SDF while extending the perimeters of Japan's air and naval responsibilities (Chapter 2 provides details). This improvement reflects sustained and substantial increases in the resources allocated to defense. Between 1970 and 1989, for example, defense expenditures rose from 0.79 to 1.01 percent of Japan's gross national product (GNP). The relative priority accorded defense also shifted. As Table 1 shows, the ratio of Japanese defense expenditures to the national budget increased from 5.1 percent in 1981 to over 6.5 percent by the end of the decade. Throughout much of the 1980s,

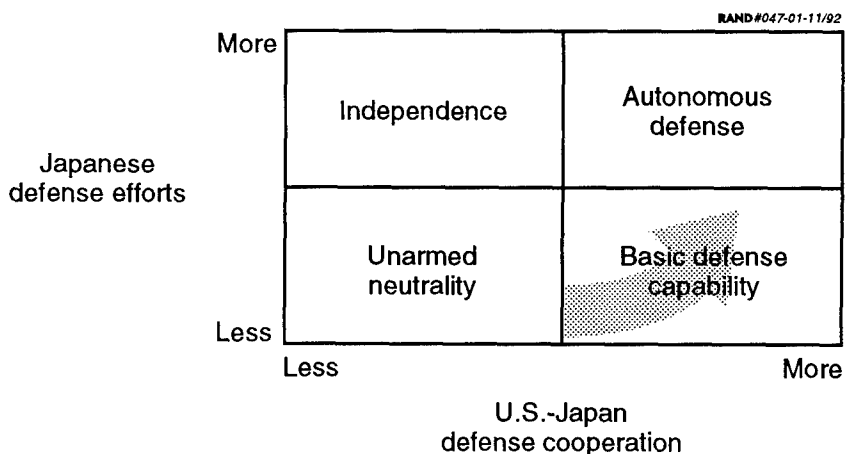


Figure 1—Japanese Defense Policy Trend, 1970–1990

⁶See, for example, "Tenki ni tatsu boei no arikata," *Kokubo*, February 1976, pp. 8–63, which records a lively roundtable discussion between Kubo and senior military leaders of the Defense Agency (JDA) at the time the *Taiko* was being formulated.

Table 1
Trends in Japanese Defense Spending, 1981–1989

FY	Original Budgets (100 million ¥)		Defense as Percentage of GNP	Defense as Percentage of General Account
	General Account	Defense		
1981	467,881	24,000	0.91	5.13
1982	496,808	25,861	0.93	5.21
1983	503,796	27,542	0.98	5.47
1984	506,272	29,346	0.99	5.80
1985	524,996	31,371	0.99	5.98
1986	540,886	33,435	0.99	6.18
1987	541,010	35,174	1.00	6.50
1988	566,997	37,003	1.01	6.53
1989	604,142	39,198	1.00	6.49

SOURCE: *Boei Nenkan*, 1983, 1987, 1990.

Japanese defense spending annually increased by more than 5 percent in real terms.

Much of this increased spending went to procuring new weapons and equipment. From when the *Taiko* was adopted in 1976 to 1990, Japanese spending on equipment acquisition rose from ¥248 billion to ¥1.1 trillion while the share of the defense budget going to personnel declined from 56 to 41 percent (see Chapter 4 for further details). As illustrated in Figure 2, Japanese spending on defense R&D increased by a factor of seven in the same period. At the same time, Japan significantly expanded its military interactions with the U.S. As Table 2 shows, the Japanese began to participate actively in expanded joint operational planning and military exercises, building on the 1978 Guidelines on U.S.-Japan Defense Cooperation and Japan's 1981 decision to accept responsibility for the defense of Japanese territory and sea lanes out to a distance of 1,000 miles. The Japanese gradually increased their financial support for the U.S. military presence in Japan and broadened their willingness to facilitate the operation of U.S. military forces in the region and beyond. They also agreed to make an "exception" to their longstanding ban on arms exports so that military technology could

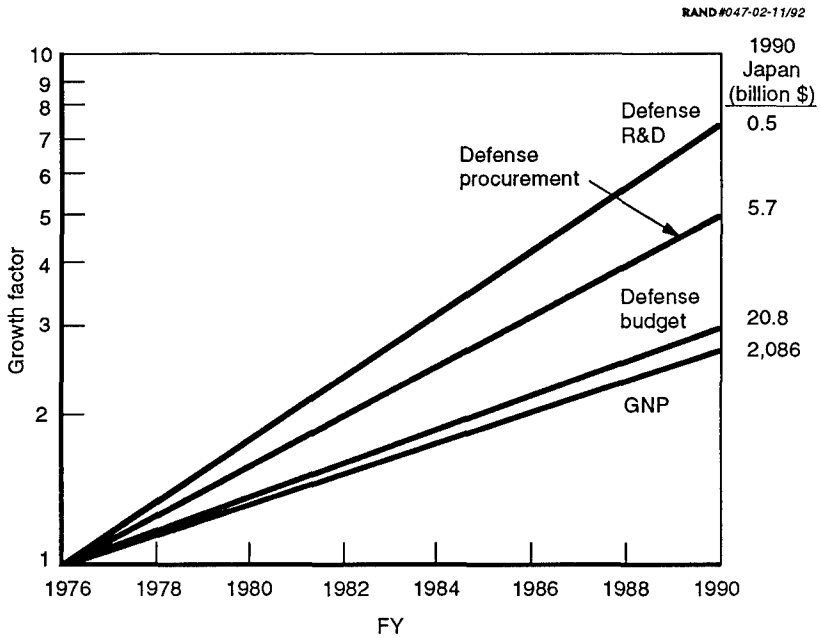


Figure 2—Defense Spending Trends, 1976–1990

Table 2
U.S.-Japan Joint Military Exercises, 1978–1988

FY	Number of Troops		Number of Ships (Aircraft)		Number of Aircraft	
	Ground SDF	U.S. Forces	Maritime SDF	U.S. Forces	Air SDF	U.S. Forces
1978	0	0	14 (23)	23 (33)	60	55
1981	1160	600				
1988	4545	4850	97 (133)	20 (101)	1166	857

SOURCE: *Sekai*, November 1988, p. 34.

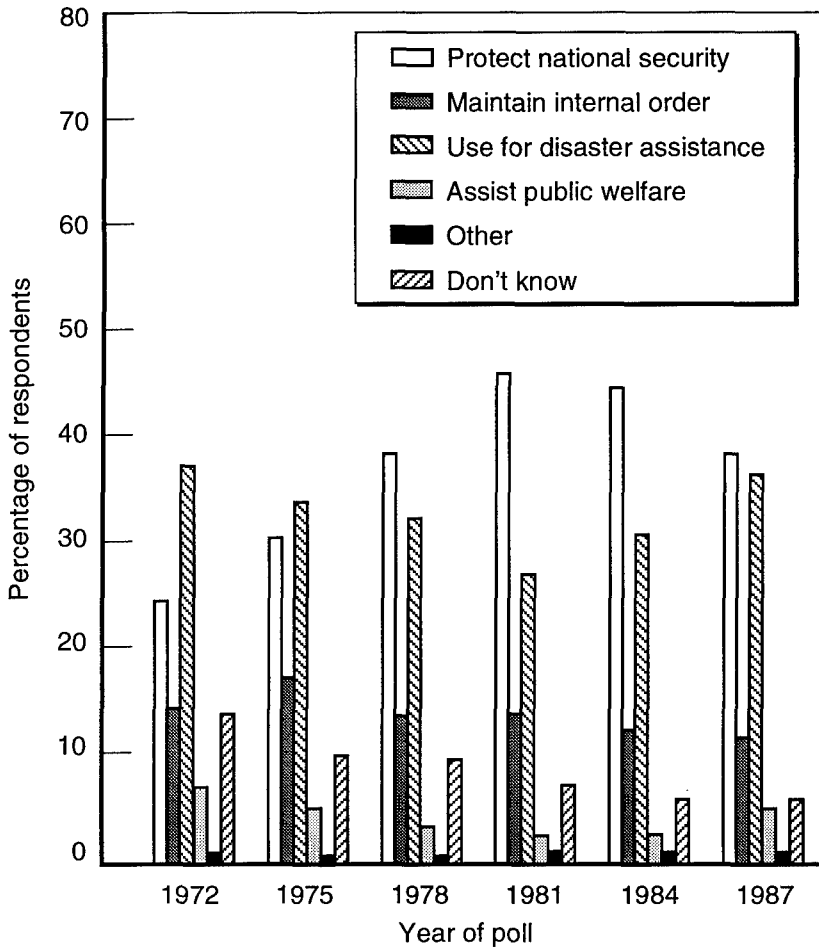
be transferred to the U.S.⁷ Japan also supported the U.S. on a string of international political and arms control issues while substantially increasing its economic assistance to countries of strategic importance to the U.S. (e.g., Egypt, Pakistan, and Turkey).

A number of factors contributed to this policy trend: the extraordinary Soviet military buildup in the Far East during the 1970s and early to mid 1980s and the heightened tensions between the superpowers; increased U.S. pressures for greater Japanese defense and burden-sharing efforts; and growing Japanese uncertainties about the long-term U.S. military presence and role in the region in the wake of the 1969 "Nixon Doctrine," the U.S. military withdrawals from Asia in the early 1970s, and the fall of South Vietnam in 1975. Also important was a new awareness, spawned by the 1973 and 1979 oil shocks and in a wider sense by Japan's increasingly global economic involvement, of the linkage between Japan's economic and military security. U.S. efforts to revitalize its regional presence between the late 1970s and late 1980s and to integrate Japanese-American military efforts provided a further spur for Japan's increased efforts.

The result was the development of a greater Japanese domestic consensus that Japan needed to provide more of its own security. This development is reflected in Figure 3, which shows that the proportion of the Japanese public favoring greater SDF attention to protecting national security rose from less than 24 percent in 1972 to 45 percent in the mid 1980s and 38 percent in 1987. It is also reflected in Figure 4, which shows that the proportion of Japanese favoring increased Japanese defense spending rose from 9.8 percent in 1972 to 20 percent nearly a decade later. That percentage later fell back, to 14 percent in 1984 and then 11 percent in 1987, reflecting the fact that Japanese anxieties gradually lessened as Soviet-American tensions abated somewhat and the U.S. played a more assertive regional role. It is noteworthy, however, that broad Japanese support for the government's defense policy did not diminish. On the contrary, the proportion in favor of either increasing defense spending or keeping

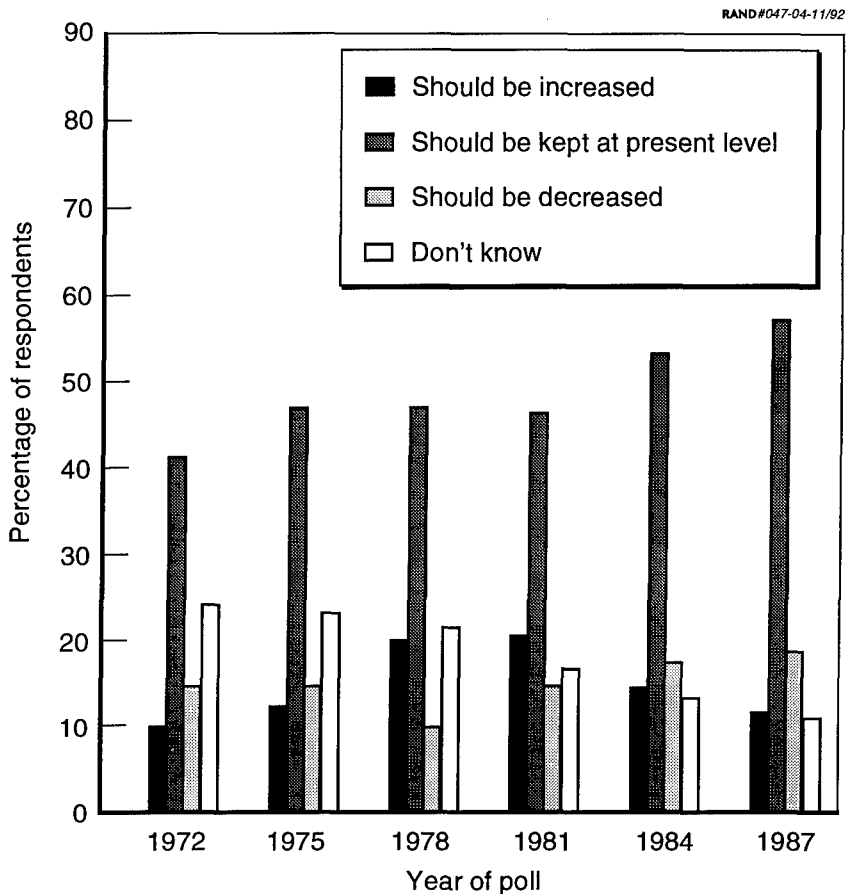
⁷This latter agreement covers not only military but, more importantly, all "defense-related" (i.e., dual-use) technologies. See *Japanese Military Technology: Procedures for Transfers to the United States* (U.S. Department of Defense, February 1986).

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SOURCES: *Boei Nenkan 1988* and *Seron Chosa*, August 1988.

**Figure 3—Japanese Attitudes on Where SDF
Emphasis Should Be Placed in Future**



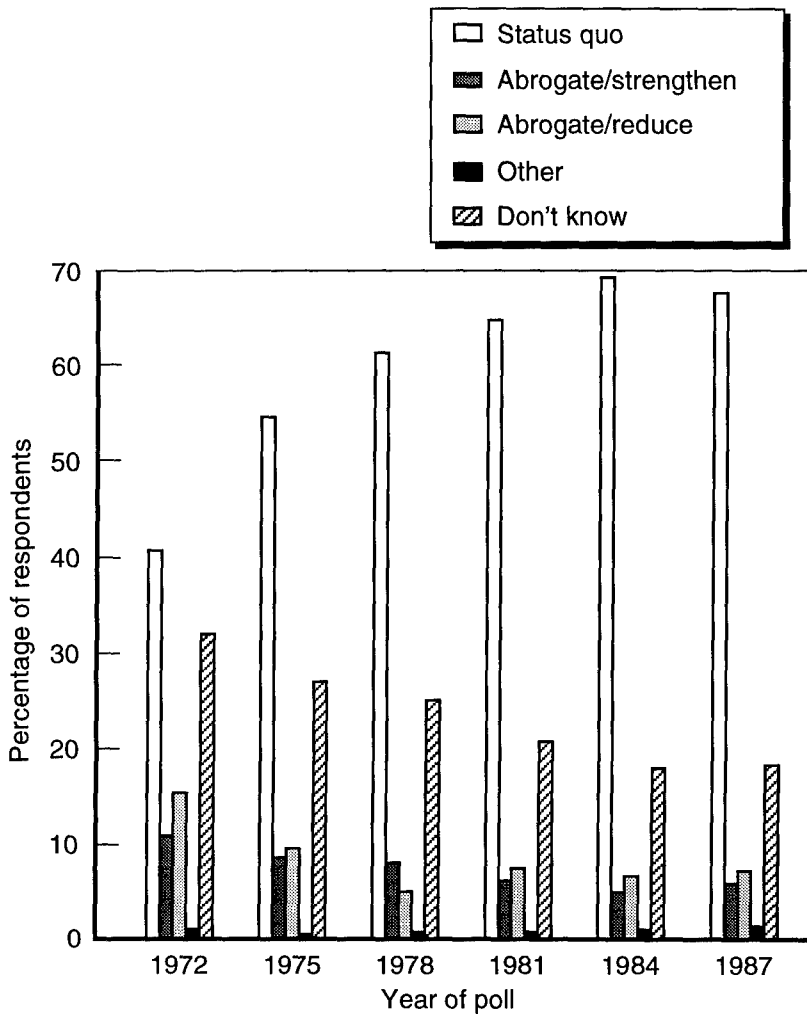
SOURCES: *Boei Nenkan 1988* and *Seron Chosa*, August 1988.

Figure 4—Japanese Attitudes on Scale of Defense Budget

it at its current level, which was less than 52 percent in 1972, remained at nearly 70 percent throughout the latter 1980s.

Even more important, perhaps, is the fact that public support for the government's broader defense policies increased significantly. As Figure 5 suggests, nearly 70 percent of the Japanese public came to

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SOURCES: *Boei Nenkan 1988* and *Seron Chosa*, August 1988.

Figure 5—Japanese Attitudes on Best Way to Protect Japan's Security

feel by the mid 1980s that the best way to protect Japanese security was "with both the Self-Defense Forces and the U.S.-Japan Security Treaty as at present" (represented in the figure as "status quo"). This increase, up from 40 percent in the early 1970s, coincided with a decrease in public support for two other ways to provide security: abrogation of the Security Treaty coupled with a strengthening of the SDF so that Japan could defend itself alone, and abrogation of the Security Treaty coupled with reduction or abolishment of the SDF. As the middle ground in Japan broadened over the course of the 1970s and the early to late 1980s, the debate over defense became more "realistic," and the government found new leeway for bolstering Japanese military capabilities.

THE EVOLVING SECURITY ENVIRONMENT: CHANGE AND CONTINUITY

Clearly, we have entered a new era. The crisis of communism and the end of the Cold War have created a new global security environment, and many of the factors that shaped Japanese defense policies over the past two decades have either already changed or are now in flux. At the same time, however, important continuities will heavily influence Japan's future direction. These elements of change and continuity are addressed next.

External Elements of Change

Four main external developments affect Japan's security calculations. The first is the deterioration of the domestic situation in the former Soviet Union and related changes in Soviet regional policies. Even before the collapse of the Soviet Union, Moscow's internal difficulties had induced the Soviets to withdraw from Afghanistan, draw down their military forces in Mongolia and along the Sino-Soviet border, and unilaterally withdraw the bulk of their forward-based assets from Vietnam. Although the Soviets continued to make qualitative improvements in their Far East forces until recently (discussed below), they withdrew their medium-range missiles as part of the global Intermediate-Range Nuclear Forces (INF) agreement and reduced the scope of their naval and training exercises. At the same time, they have been trying to tap into the region's economic dy-

namism. Consequently, they have been playing down the utility of military force, playing up arms control and the peaceful resolution of disputes, and replacing their previous emphasis on ideology with more traditional practices.⁸ These developments have not only reduced Russia's *ability* to conduct sustained offensive operations in Asia, they have also altered Asian perceptions of Russia's *intentions* for the region. The disintegration of the Soviet Union and Moscow's unambiguous rejection of communist ideology and an authoritarian political structure will undoubtedly accelerate these trends.

The second external development, the dramatic improvement in superpower relations, is linked closely to Moscow's domestic difficulties. This improvement dates to the decision to withdraw Soviet troops from Afghanistan, but it only really gathered force after Moscow allowed Eastern Europe to chart its own course in domestic and foreign affairs. Since then, the superpowers have formally declared the Cold War over, signed a long-pending strategic arms reduction agreement, jointly sought to integrate the former Soviet Union into the world economy, and coordinated policies on a range of international political issues. Soviet support of the U.S.-led international opposition to Iraq's invasion of Kuwait was a key factor precipitating talk of a new world order. And though no superpower cooperative efforts in Asia have yet equalled the unprecedented Soviet-American cooperation in trying to arrange a peace conference in the Mideast, the superpowers have worked together to resolve such regional hot spots as Cambodia and Korea. This new superpower relationship has contributed to a move away from the tight and tense bipolar structure of regional security in the 1970s and 1980s toward today's more fluid and relaxed, if uncertain, environment.

The third key external development is the general U.S. move toward a less prominent regional military posture. This change stems from well-known sources: reduced American perceptions of external

⁸Carolyn McGiffert Ekedahl and Melvin Goodman, "Gorbachev's 'New Directions' in Asia," *Journal of Northeast Asian Studies*, Fall 1989, pp. 3-6. Also see, Donald Zagoria, "Soviet Policy in East Asia: The Quest for Constructive Engagement," *The Korean Journal of Defense Analysis*, Summer 1990, pp. 7-31; P. Lewis Young, "Soviet Foreign Policy Priorities in Asia: Four Years of the Gorbachev Era," *Asian Defence Journal*, March 1989, pp. 6-22; and Mikhail G. Nossov, "The USSR and the Security of the Asia-Pacific Region," *Asian Survey*, March 1989, pp. 252-267.

threat in the wake of the global communist crisis and improved superpower relations; strong downward pressures on defense spending as a result of the threat reduction and large U.S. budget deficit; diminished public support for the continued U.S. assumption of a heavy international burden; and the objective ability of key Asian countries, given their sustained economic growth and rising technological capabilities, to play larger roles in their own defense. As a result, after a decade of efforts to revitalize the U.S. military presence in the region and stimulate greater regional military integration, the U.S. is reducing its forward-deployed military forces, cutting back on regional military exercises, and moving from a leading to a supporting role in places where it has long been dominant (e.g., Korea).⁹ The U.S. government has reaffirmed its security alliances and regional defense commitments. It has also pledged to maintain substantial, if reduced, military deployments in the Pacific and to continue to play an active political role. But the general trend is toward a scaling back of the U.S. presence. The relatively low level of U.S. attention to Asia, given the Bush administration's preoccupation with developments in the former Soviet Union, Europe, and the Middle East, has intensified long-standing Asian uncertainties about long-term U.S. intentions.

The final key development relates to American attitudes toward Japan. These attitudes are complex and cannot be simply depicted. On the one hand, as public opinion polls repeatedly demonstrate, a substantial majority of Americans maintain positive feelings toward Japan. A June 1990 *New York Times*/CBS poll, for example, found that 75 percent of Americans characterize their overall feelings toward Japan as "generally friendly."¹⁰ In other polls, 44 percent still regard Japan as an "ally that can be trusted." Such positive feelings are, however, clearly eroding. For example:

- A Times Mirror survey found that the proportion of Americans holding a favorable view of Japan fell from 70 percent in May

⁹See, for example, *A Strategic Framework for the Asian Pacific Rim, A Report to Congress*, 1992.

¹⁰*New York Times*, July 10, 1990.

1987 to 56 percent in May 1990. Those holding an unfavorable view rose from 27 percent to 39 percent in the same period.¹¹

- A Gallup poll in October/November 1990 for the Chicago Council on Foreign Relations found that Japan's "mean temperature"—i.e., the warmth of the American public's feelings toward Japan—fell from 61 degrees in 1986 to 52 degrees in 1990. A full 60 percent of the American public and 63 percent of American leaders now regard Japan's economic power as a "critical threat" to the U.S.¹²
- The proportion of Americans who regard Japan as a "dependable ally" dropped from 50 percent in 1989 to 44 percent in 1990. And this latter percentage is only slightly greater than the 40 percent (up from 29 percent in 1989 and the highest figure registered since 1960) who indicated that they consider Japan unreliable.¹³
- A *Business Week*/Harris poll in the wake of the Persian Gulf War found that 73 percent of the American public believed that Japan got away without contributing its fair share to the coalition effort. Only slightly less (68 percent) felt the U.S. should adopt a harder line on trade issues with Japan in retaliation for its behavior during the war; 64 percent said they were less likely as a result to buy Japanese products.¹⁴

Such polls undoubtedly reflect broader socioeconomic trends: a diminished public feeling in the U.S. of military danger; a growing sense that U.S. fortunes will be determined by economic rather than military competition; the persistent U.S. recession and the new focus on American jobs, which foreign trade practices are widely perceived to endanger; a spreading anxiety about a loss of U.S. economic independence and about the ability to compete in the new global environment; an emerging belief that countries other than the former

¹¹ *Washington Post*, September 19, 1990.

¹² The decreasing regard for Japan was one of the major themes to emerge from this comprehensive survey of American attitudes toward global issues. See Ed Rielly, *American Public Opinion and U.S. Foreign Policy 1991* (The Chicago Council on Foreign Relations, 1991), p. 7.

¹³ The survey these results are from is an annual Gallup poll conducted for Japan's Foreign Ministry; *Japan Times Weekly International Edition*, April 16–22, 1990.

¹⁴ *Business Week*, April 1, 1991, p. 28.

Soviet Union will be the U.S.'s chief challengers; and a growing conviction that other countries do not "play fair" in global interactions. Particularly conspicuous, however, is the extent to which such attitudinal changes tend to focus on Japan. Germany, for example (and the European Community in general), consistently fares better than Japan on most public opinion surveys.¹⁵ The changes in public opinion are matched, moreover, by the spate of academics and journalists, known collectively as "revisionists," who castigate the Japanese for everything from their mercantilistic trade practices to simply being "different."¹⁶ This surge in anxiety over Japan has eroded support in the U.S. for free trade policies with Tokyo while also creating confusion about appropriate long-term U.S. policy objectives.

Internal Elements of Change

Although the changes in the external environment have understandably captured the most attention, there have also been significant changes inside Japan. Probably the most important has been the advent of a divided government for the first time in the postwar period. The split dates to July 1989, when the ruling Liberal-Democratic Party (LDP) lost its majority in the House of Councillors (the upper house of Japan's bicameral legislature) for the first time in its then 34-year history. Not only did it lose, it lost big: LDP strength plummeted from a 142-seat majority in the 252-seat House of Councillors (a result of a large 72-seat LDP victory in the previous House of Councillors election in 1986) to a 109-seat plurality, with the combined seats held by the political opposition (143) constituting a clear

¹⁵According to the *Business Week*/Harris poll cited above, only 46 percent of the American public felt that Germany did not do its "fair share" during the Gulf War, and a full 47 percent (versus only 28 percent for Japan) said they would not like to see the U.S. take a tougher line on trade with Germany in retaliation for its behavior.

¹⁶See, for example, James Fallows, "Containing Japan," *Atlantic Monthly*, May 1989; and R. Taggart Murphy, "Power Without Purpose: The Crisis of Japan's Global Financial Dominance," *Harvard Business Review*, March-April 1989. For full-length treatments, see Karel von Wolferen, *The Enigma of Japanese Power: People and Politics in a Stateless Nation* (Knopf, 1989); and Clyde Prestowitz, *Trading Places: How We Allowed Japan to Take the Lead* (Basic Books, Inc., 1988). For a particularly sensationalist treatment positing inevitable military conflict between Japan and the U.S., see George Friedman and Meredith LeBard, *The Coming War with Japan* (St. Martin's Press, 1991).

majority. The leftist JSP did particularly well: it captured more than one-third of the seats up for election (46 of 126 seats, versus only 36 for the LDP), raising its House of Councillors strength from 43 to an unprecedented 72 seats.¹⁷

Japan's lower house, the House of Representatives, is by far the more powerful body. Under the Japanese Constitution, it has the sole determining say concerning the election of the prime minister and approval of both the national budget and international treaties.¹⁸ But every other piece of legislation must gain the approval of the House of Councillors (or be passed again by a two-thirds majority of the House of Representatives). Even in the areas under House of Representatives purview, moreover, the ruling party as a practical matter has to take the interests of the House of Councillors into account. The LDP loss seriously circumscribed the ruling party's authority and ensured a greater voice for the political opposition in the formulation of politically sensitive national policies. The LDP's extraordinary efforts to secure opposition party acceptance of the government's plan to contribute \$9 billion to the international peacekeeping operation in the Persian Gulf may be a harbinger of what to expect in the new environment.¹⁹

The LDP retained its majority in the February 1990 election for the House of Representatives, capturing 275 of the 512 seats. With the addition of 11 independents who joined the party after the election, this brought LDP strength in Japan's House of Representatives to a commanding 286 seats. Still, the JSP did well: with 24 percent of the popular vote (an increase of 7 percent over the last House of

¹⁷For short summaries in English, see Hans Baerwald, "Japan's House of Councillors Election," *Asian Survey*, September 1989, pp. 833-841; and Japan Economic Institute, "Japanese Politics: A New Era?" *JEI Report*, No. 32A, August 18, 1989.

¹⁸For the text of the Japanese Constitution, see John Maki, *Government and Politics in Japan* (Praeger, 1962), pp. 245-258.

¹⁹The LDP government made unprecedented concessions to the two centrist parties—the Democratic Socialist Party (DSP) and the Komeito—for cuts in defense and certain other budgeted expenditures and promised not to raise taxes in exchange for their agreement. These concessions followed others to gain triparty agreement on the modalities of Japan's future participation in UN peacekeeping operations, as well as an extraordinary decision by the LDP to go against its own Tokyo party chapter and side with the Komeito and DSP in endorsing a candidate in the 1990 Tokyo gubernatorial elections.

Representatives election in 1986, compared to a *decline* of 3.3 percent for the LDP), it secured 136 seats (139 after the addition of independents) for a net gain of 51 seats (versus a net *loss* for the LDP of 20 seats before the addition of independents). Many of these Socialist gains, moreover, came at the expense of Japan's two centrist opposition parties: the JSP took away 10 seats from the DSP and 8 from the Komeito, leaving them with a total of 14 and 45 seats, respectively.²⁰ The JSP suffers from serious structural and organizational difficulties, however. Its future as a responsible opposition party, let alone as a candidate for taking over the Japanese government, remains problematic. But the JSP has and will hold a significant share of seats in the Diet. So, too, will the other opposition parties, some of whom (such as the Komeito) have shown increasing organizational capabilities. Despite the LDP House of Representatives victory, therefore, the election did nothing to reverse the basic trend toward divided authority.

Given the LDP's declining popularity and the number of seats it must win if it is to recapture control of the House of Councillors, the ruling party will not be able to regain control of both houses until at least 1996, and possibly not until the end of the decade.²¹ This situation suggests that the 1990s will continue to be a decade of slow and painstaking efforts at political consensus-building. It also suggests, quite apart from changes in the international environment, that matters pertaining to defense will remain controversial and require at least some opposition support.

²⁰Hans Baerwald, "Japan's 39th House of Representatives Election," *Asian Survey*, June 1990, pp. 547-548; and Michael Donnelly, "No Great Reversal in Japan: Elections for the House of Representatives in 1990," *Pacific Affairs*, Fall 1990, pp. 304-305. Donnelly's slightly different figures reflect the movement of House members who were elected as independents but then joined one of the existing parties.

²¹Elections for the House of Councillors are held every three years for half the membership. The LDP needed to win 91 seats in the 1992 election for it to regain the majority. As it turned out, the LDP won a historic victory, capturing 69 of the 127 seats at stake. Compared to the 36 seats it won in 1989, this was a dramatic turnaround, but it was still considerably short of the number required to regain control of the Diet. Indeed, the total number of LDP seats after the 1992 election "victory" (108) was two less than the number after the 1989 "defeat" (110). This result stems from the unusually large number of LDP seats that were up for reelection this year because of the party's success in the 1986 election. For details, see *Asahi Shinbun*, July 28, 1992, and *Los Angeles Times*, July 29, 1992.

The second most important internal change has to do with Japanese society in general. After nearly four decades of successful economic growth, Japan is becoming a less regimented and more pluralistic society. The historic emphasis on growth is giving way to a more complex set of competing objectives. Consider, for example, the following items:

- Japan is rapidly heading toward negative population growth. The fertility rate in 1990 dropped to 1.57, which is about 30 percent less than the current U.S. birth rate and Japan's lowest level in the postwar period. Among the factors most often cited as contributing to this trend are the heavy economic burden of raising children, the difficult housing situation resulting from mushrooming land prices, and new Japanese lifestyles emphasizing careers and leisure time for both spouses.²²
- Japan's population is rapidly aging. Low infant mortality rates and long life spans have combined to make today's share of the elderly in Japan's total population (12 percent) almost the same as that of the U.S. By 2000, that share will be approaching those of Europe, Germany, and Sweden. Projections anticipate that people 65 and older will constitute nearly 25 percent of the Japanese population by 2025.²³
- Japan is experiencing a growing gap in personal assets in what has been a broadly middle-class society. Skyrocketing land prices are creating two new classes, the landowning rich and the landless poor, while rapidly rising stock values are inflating the wealth of the already wealthy.²⁴ Public outrage over the recent series of scandals in Japan involving preferential banking and stock transactions reflects a Japanese perception of growing social inequity and diminished acceptance of what one observer aptly termed the "rich nation, poor people" paradox.²⁵

²²Keizai Koho Center, "Japan Heads Toward Negative Population Growth," *Japan Update*, Spring 1991, pp. 4-5.

²³*Ibid.*, p. 6.

²⁴Kotaro Tawara, Kimihiro Masamura, and Takashi Inoguchi, "Kore de 90 nendai o norikireru no ka," *Chuo Koron*, April 1990, pp. 128-129.

²⁵Yoshi Tsurumi, "The Japanese Backlash," *Far Eastern Economic Review*, August 16, 1990, p. 16. In the most recent scandal, most of Japan's brokerage houses acknowl-

Such trends constitute serious problems for the Japanese government. Over the long term, a shrinking work force, declining savings rates, and rising outlays for social welfare will impede the government's growth objectives and constrain available resources. Even now, the government's call for a "breeding boom" and the increased priority on SDF manpower attest to the importance of these trends. For the Japanese public, they are increasing the salience of issues pertaining to quality of life and heightening the attractiveness of concepts such as "individualism" (*kojinshugi*), which heretofore had generally negative connotations. Together with the state's decreasing role in the economy and society, they are contributing to a weakening of the previous bureaucracy-dominated order (a development expedited by the fragmentation of political interests in Japanese society, the steady decrease in the number of retired bureaucrats winning Diet seats as LDP members, and the rise of second-generation—i.e., sons of Diet members—party politicians) and the incipient development of a more pluralistic society. They are also creating a policy environment that is more complex and demanding than the one familiar to conservative party leaders for so long.²⁶ The seemingly unending series of political scandals exacerbate the challenge for Japanese governmental leaders while raising the potential for further fractures within the ruling party.

The third internal change concerns Japanese attitudes toward the U.S. As described earlier with regard to American attitudes toward Japan, there is a certain dualism within the Japanese public. On one hand, the critical importance of the U.S. to Japanese interests is virtually universally recognized, and strong majority support exists for Japan's continued alliance with the U.S. Indeed, public awareness of the need for enhanced Japanese contributions in support of the alliance have underpinned the government's increased efforts over the past decade to strengthen U.S.-Japan security relations.

On the other hand, however, the image of the U.S. has significantly deteriorated in Japan over the past few years, just as the Japanese

edged that they secretly reimbursed a select group of large clients for their trading losses. Most of Japan's average investors, of course, had to bear their own losses. For a short summary, see *Washington Post*, August 8, 1991.

²⁶For an excellent treatment of Japan's ongoing political transformation, see Gerald L. Curtis, *The Japanese Way of Politics* (Columbia University Press, 1988).

image has done in the U.S. To an increasing number of Japanese, the U.S. has grown fat and lazy, unable to put its own economic house in order and unwilling to bear the costs of policies that promote America's own interests. Rising resentment of what many Japanese regard as constant U.S. hectoring on trade and burden-sharing issues reinforces this emerging image. At the most basic level, the Japanese have tired of having Japan singled out as an "unfair" international actor and of being blamed for problems they regard as largely faults of the U.S.²⁷ These feelings are matched by growing resentment over what many Japanese perceive as American unilateralism, reflected economically in the U.S. "Super 301" policies mandating unilateral American restrictions on Japanese imports in response to perceived "unfair" trading practices by Japan, and politically in the American demands for large Japanese financial contributions to the multinational military effort in the Persian Gulf that were made without first consulting Japan. U.S. performance in the Persian Gulf improved the American image in certain Japanese quarters, but it reinforced beliefs in others that the U.S. should be feared as much as respected.²⁸ It also heightened Japanese desires for a more equal, less dependent relationship with the U.S. and reinforced the conviction that changes in U.S.-Japan relations were needed.

Such sentiment has fed an incipient anti-U.S. nationalism in Japan, particularly among the younger generation, and has begun to weaken support for cooperation with the U.S.²⁹ One manifestation of this nationalist trend is the appearance of a new group of *Japanese* revisionists. Provoked by their American counterparts, confident of Japanese economic and technological strength, and doubtful about

²⁷Kan Ito, "Trans-Pacific Anger," *Foreign Policy*, Spring 1990, p. 133.

²⁸"More Japanese See 'Fearsome' U.S. After Gulf Victory," *Wall Street Journal*, March 14, 1991. In perhaps the most dramatic example, a Japanese poll taken on June 22-23, 1991, after the Persian Gulf experience, found that roughly 24 percent of the Japanese public viewed the U.S. as the country most "threatening" to Japan, versus 22 percent who saw the Soviet Union in these terms. A similar poll taken in 1988 had the figures reversed, at 33 percent for the Soviet Union and 11 percent for the U.S. For an English-language summary, see *Report from Japan*, July 8, 1991.

²⁹For a particularly high-profile account of this development, see the report prepared by Professors Seizaburo Sato and Shinichi Kitaoka, two leading conservative intellectuals long influential in Japanese politics, for the Japan Institute for International Affairs (JIIA), a research institute run under the auspices of Japan's Foreign Ministry. A summary of the report is in *Yomiuri Shinbun*, March 18, 1991.

the long-term U.S. commitment, leaders of this rightist group castigate the U.S. for a range of alleged shortcomings (from inferior education to racial prejudice) and call for Japan to adopt a more independent foreign policy posture.³⁰ There has also been a renaissance of Japanese nationalism on the other side of the spectrum. Those in this group regard the principles of Japan's "peace constitution" as embodying contemporary Japanese uniqueness. They see a foreign policy based on these principles as the way to fulfill Japan's nationalist aspirations. They also call for revision of Japan's "U.S.-centered" diplomacy and want Japan to assume the global lead in adopting a policy of "non-domination."³¹

The extremist quality of its revisionist rhetoric has won the group on the right wide attention in the U.S., most conspicuously through the unauthorized English translation of "*NO*" to *Ieru Nihon* (*The Japan that Can Say No*). This group should be tracked closely given its *potential* significance. But the non-dominationists on the left probably more accurately reflect postwar Japanese intellectual sentiment. They also are more evident in the public debate today.³² Whatever the differences between these groups, however, both believe that Japan can manage without the U.S.-Japan military alliance. In the context of seemingly endless Japan bashing in the U.S., their common call to "say no" to America has begun to strike a responsive chord.

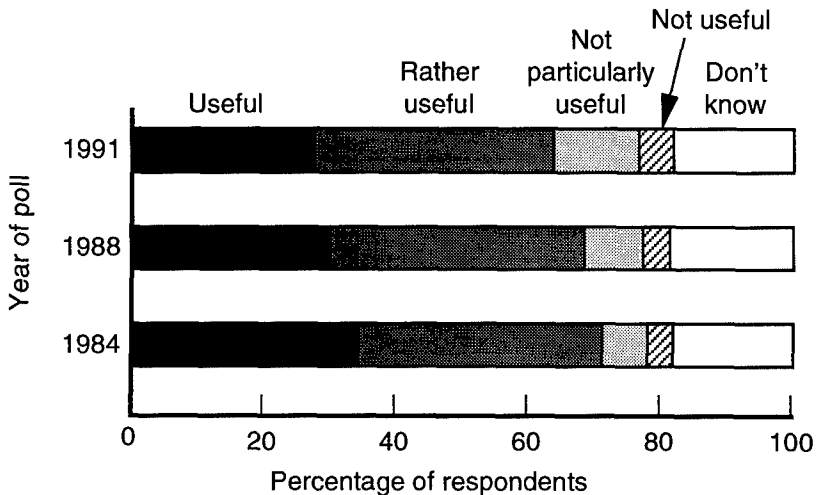
³⁰See, for example, Shintaro Ishihara's chapters in his book with Akio Morita, "*NO*" to *Ieru Nihon* (Kobunsha, 1989), and his article "NO wa NO de aru," *Bungei Shunju*, November 1989, pp. 94-111. Other neonationalists vary in different ways from Ishihara, but all share his confidence in Japan's national capabilities. See, for example, Hajime Karatsu, "Nichibei no 'tokushu' o iu no wa yameyo," *Chuo Koron*, January 1990, pp. 81-90.

³¹Kinhide Mushakoji, "Nihon wa ima sugu taibei kijiku gaiko o minaose," *Ekonomisuto*, February 1991, pp. 52-55. Also see Motofumi Asai, "Nichibei anpo taisei ni kawaru koso o," *Sekai*, July 1990, pp. 57-68; and for fuller treatment, see his book *Nihon Gaiko—Hansei to Tenkan* (Iwanami Shoten, 1989).

³²It is interesting to note, for instance, that the leading popular journals contain very few examples of articles supporting revisionist arguments. There are many blistering critiques, however. See, for example, Yoshihisa Komori, "Nihon no neo nashonarizumu o hihan suru," *Chuo Koron*, March 1990, pp. 90-109; Terumasa Nakanishi, "'Seiki no ayamachi' o sakeru tame ni," *Chuo Koron*, December 1989, pp. 90-100; and Kyudai Mineo, "'Jishu boei' wa kano ka," *Shokun*, April 1990, pp. 186-197.

Even within Japan's political mainstream, significant attitudinal changes toward the U.S. can be detected. U.S. efforts to prevent Japan from building its own fighter aircraft (the FSX), for example, were widely interpreted not as a means for improving Japanese defense capabilities, but as a way to further U.S. commercial interests. The combination of U.S. pressures to prevent a regional trading group in Asia and U.S. efforts to form a North American free trade bloc is regarded by some as an attempt to secure U.S. economic advantage. Such views do not reflect a downgrading of the importance of Japan's relations with the U.S.; the overwhelming majority of Japanese continue to value the U.S.-Japan alliance. But they do suggest at least an incipient tendency to see bad intent behind U.S. actions.

Such attitudinal changes are beginning to affect Japanese public views toward Japan's security relationship with the U.S., as can be seen in the results of the latest of the government defense-issue polls that are taken roughly every three years. As Figure 6 shows, the percentage of Japanese who regard the U.S.-Japan Security Treaty as



SOURCE: *Boei Antenna*, July 1992.

Figure 6—Japanese Attitudes on Utility of U.S.-Japan Security Treaty

useful or rather useful fell from a high of 71 percent in 1984 to 63 percent in 1991, while the percentage of those who consider the treaty not useful or not particularly useful rose from 10 to over 18 percent in the same period.³³ Not surprisingly, this eroding support for the treaty has begun to affect views on how Japan should provide for its security. From 1984 to 1991, the percentage of Japanese who wanted to protect Japanese security "with both the Self-Defense Forces and the U.S.-Japan Security Treaty as at present" (the status quo option depicted earlier, in Figure 5) fell from nearly 70 to 62 percent, while those seeking abrogation of the treaty and a strengthening of the SDF and those seeking abrogation of the treaty and a reduction of the SDF rose from 5 to over 7 percent and from 6.8 to over 10.5 percent, respectively.³⁴

External Elements of Continuity

Having emphasized the key changes, it is also important to stress that there are some important continuities. One of the major external elements of continuity is Russia, which remains a long-term Japanese worry. Before the Soviet Union collapsed, it announced a program to reduce its Far East forces by 120,000 men, 12 divisions, and 16 naval vessels by 1992, and it carried out major troop reductions in the Far East in 1990 for the first time since the mid 1960s. The Soviet Union's disintegration is likely to bring additional reductions amidst a broader erosion in Russia's military potential. Given the state of its economy, Russia may not be able to remain a major military power in the Far East, even if its leaders want to. Nevertheless, one-fourth to one-third of the Russian military's total strength is still deployed in the Far East, with roughly 60 to 80 percent of the land and air divisions deployed in areas close to Japan.³⁵ Much of this strength comprises Russia's most modern weapons.

³³"Jieitai, boei mondai ni kansuru seron chosa," *Boei Antenna*, July 1991, p. 35.

³⁴*Ibid.*, p. 36.

³⁵Ichio Inui, "Kore ga kyokuto de no soren gunji senryaku da," *Chuo Koron*, October 1989, p. 275. Press reports of the 1991 JDA white paper suggest the Japanese government remains highly sensitive to these large forward deployments. "Soviet Threat Still Exists, White Paper Says," *Japan Times Weekly International Edition*, August 5-11, 1991.

At the same time, there has been no change in the Russian policies on Japan's Northern Territories, a fact that continues to heavily influence Japanese attitudes toward Moscow and inhibit an improvement of bilateral relations. If anything, Russian internal difficulties may exacerbate rather than facilitate resolution of these issues by hindering Russian concessions. These difficulties, moreover, call into question the future of Russian reform—indeed, of Russia itself. Many Japanese believe that a return to a more traditional kind of Russian leadership should not be precluded. Given the size of the Russian republic, the concentration of Russian military power in areas around Japan, and the history of Russia-Japan relations, such a Russia could constitute a potential threat to Japan.

Regional trends also remain worrisome. The Japanese are particularly sensitive to the danger of nuclearization on the Korean peninsula. Whether South Korea attempts to preempt North Korea's development of nuclear weapons or takes matching steps, the effect on Japanese security will be enormous.³⁶ And there are many other developments that could be destabilizing: continuing political instabilities in both North and South Korea, any one of which could set off a major conflict on the peninsula; increasing Chinese assertiveness concerning offshore contested territories and the development of the political infrastructure and military capabilities to support Chinese claims to these territories; ongoing difficulties *within* China, including problems of leadership legitimacy and a weakening of central political control; the proliferation of sophisticated conventional weapons (especially ballistic and other tactical missiles) and the rise of strong regional powers; and continuing instabilities in areas ranging from South Asia to the Middle East. Added to these external elements are, as mentioned above, significant uncertainties about the U.S.'s future military presence and regional role.

These uncertainties and potential sources of instability are intensified by one further continuing factor: Japan's fundamental geostrategic isolation. Put simply, Japan is surrounded by potential antagonists and has no "natural" allies. Over the course of its history,

³⁶Our interviews and discussions in Japan made it clear that the Japanese take this development seriously. Although antinuclear sentiments remain overwhelmingly dominant, Japan's nuclearization is being discussed as a *conceivable* possibility for the first time in the postwar period.

Japan has either remained isolated from its neighbors or sought dominance over them. In the last 100 years alone, Japan has defeated Russia in one war (1904–1905), invaded it a second time (1918), fought two wars with China (late 1890s and the 1930s), and colonized Korea (1910–1945). Japan's effort to militarily extend its dominance throughout Asia and the Pacific in the 1930s formally launched World War II. Indeed, in the modern era, Japan has been able to simultaneously enjoy economic prosperity, develop political democracy, and maintain both security and peaceful relations with its neighbors only when it has maintained alliances with the Anglo-American West: during the brief Anglo-Japanese alliance in the early 20th century and during the current U.S.-Japan alliance begun after World War II.³⁷ This record ensures continued sensitivity toward Japan throughout the region. It also accounts for the high priority Japanese leaders continue to give to staying in step with Western policies.

Internal Elements of Continuity

If anything, the continuities inside Japan are even stronger than those outside. First of all, the Japanese remain a very conservative people, their fundamental orientations changing only very slowly. This factor helps to explain the long domination of Japanese politics by the LDP, which, alone among parties in major Western democracies, has ruled without interruption since its formation (more than 35 years ago). It also plays an important part in issues such as dealings with Russia, given the history of Russia-Japan relations and Moscow's continued occupation of what the Japanese regard as their sovereign territory. This conservatism creates a built-in policy inertia and limits, without ruling out, the potential for abrupt swings in national policies.

At the same time, Japan's dependence on imported resources, coupled with its fundamental geo-strategic isolation, contributes to the second internal continuity: a perpetual sense of vulnerability. In public opinion polls, editorial cartoons, and political discussions, the Japanese continually portray themselves as weak and fragile, heavily

³⁷Hisahiko Okazaki, "Magarikado ni kita nichibei domei," *Bungei Shunju*, July 1988, p. 103.

affected by developments in distant parts of the world and lacking the means to influence their future direction. Data indicating Japanese economic and technological strength go by the wayside in this area: it is the *perception* that matters. If anything, this historic sense of vulnerability has been heightened over the past year or so by new Japanese anxieties that the U.S. will no longer "need" Japan now that the Cold War has ended and may "unilaterally" abrogate the Security Treaty.³⁸ These anxieties are bolstered by fears of the possible development of an "exclusive Atlantic bloc," with the U.S. tilting toward a newly unified European Community and leaving Japan isolated.

Third, as described above, a broad consensus continues to exist on the vital importance of Japan's relationship with the U.S. Most Japanese regard this relationship as critical not only to Japanese and regional security, but to achieving Japan's fundamental economic objectives. They also see it as bolstering the credibility of Japan's announced intention not to become a major military power and, at the same time, facilitating regional acceptance of a broader political role for Japan.³⁹ Changing images of the U.S. are combining with a decreased perception of external threat and increased Japanese nationalism to weaken support for the military aspects of U.S.-Japan relations and strengthen support for a more assertive role for Japan within the bilateral relationship. But few Japanese seek replacements for the relationship itself.

Finally, the impact of World War II remains very strong in Japan, which is another way of saying that the Japanese public, and even segments of the ruling LDP, retain a deep and abiding distrust of the military. This distrust probably is not surprising given that the Japanese military has been forced to bear nearly singular responsibility for Japan's disastrous prewar and wartime experience. In contrast to events in Germany, little official or other effort has been made in postwar Japan to come to terms with Japan's *collective* re-

³⁸See, for example, Soichiro Tawara, "Nichibei anpo joyaku wa ippoteki ni haiki sareru," *Ushio*, January 1990, pp. 65-72.

³⁹Two recent U.S. survey teams reached similar conclusions. See Pacific Forum CSIS, *Policy Memorandum: Strategic Change in Northeast Asia, a New U.S. Approach*, August 1991; and Johns Hopkins Foreign Policy Institute, "The Future of U.S.-Japan Relations," *Policy Consensus Reports*, August 1991.

sponsibility. The Japanese public has thus become instinctively suspicious of the military as an institution. Lacking full confidence in their own democratic institutions, the Japanese are reluctant to do anything that might let the military "genie" out of the bottle.

Few events illustrate how widespread and visceral public suspicion of the military remains today as vividly as the public reaction to the government's initial plan to establish a UN Peace Cooperation Corps (composed partly of SDF units) to participate in multinational operations in the Persian Gulf.⁴⁰ From the time the bill was proposed to the Japanese Diet on October 16, 1990, until it was abandoned 22 days later, Japan was a virtual cauldron of political opposition. Opposition party leaders, media figures, leading intellectuals, and public figures denounced the bill for violating Japan's "peace constitution" and opening the door to remilitarization. As late as February 1991, according to a United States Information Agency (USIA) poll, a majority of the Japanese opposed the use of the SDF even to help evacuate refugees from the Gulf, while nearly half either considered the government's financial contributions to the multinational military forces "too much" or believed that Japan should not have contributed at all.⁴¹ Public views moderated in the months after the conflict, ultimately coming to sanction, or at least tolerate, Japanese cooperation in UN-led peacekeeping activities, including the participation of Japanese minesweepers in Persian Gulf cleanup operations. Indeed, a broader national consensus appears to have formed around the view that Japan must find a way to make greater international contributions. But the issue of Japanese military participation in future overseas activities remains highly controversial. Both of these views are reflected in legislation recently passed by the Diet that allows Japanese participation in UN-led peacekeeping operations: it ratifies the new public consensus on the need for Japan to

⁴⁰For useful accounts, see Takashi Inoguchi, "Japan's Response to the Gulf Crisis: An Analytic Overview," and Kenichi Ito, "The Japanese State of Mind: Deliberations on the Gulf Crisis," *Journal of Japanese Studies*, Summer 1991, pp. 257-273 and 275-290, respectively. Also see Masaru Tamamoto, "Trial of an Ideal: Japan's Debate Over the Gulf Crisis," *World Policy Journal*, Winter 1990-91, pp. 89-106.

⁴¹USIA, *Research Memorandum: Japanese Divided on Gulf Contribution*, February 20, 1991. Japanese polls were comparable, showing minimal public support for the multinational peacekeeping operation in general and strong opposition—as high as 60 percent—to Japanese military involvement in particular. See, for example, *Nihon Keizai Shinbun*, February 2, 1991, and *Yomiuri Shinbun*, March 1, 1991.

make greater international contributions while seriously constraining any military role in such efforts.⁴²

Such ambivalent and antimilitary feelings affect everything about the SDF from their status to their operational capabilities. These feelings also highlight a point worth stressing: when one talks about increasing nationalism in Japan today, it is important to remember that, in contrast to the prewar period, one is talking about *nationalism*, not *militarism*.⁴³

Current Situation and Expectations About the Future

The key changes and continuities just discussed with relation to Japan's policy environment obviously suggest a complex situation. Public pressures are growing in Japan; policy interests are becoming more diverse. The broad consensus achieved on defense policy over the course of the 1970s and 1980s is narrowing at a time when the future is unusually uncertain and Japanese political leadership is unusually weak. Trends do not all point in a single direction. We describe here the general situation at the beginning of 1992 and the expectations of Japan's defense establishment for the future.

Basic Orientation: Hold the Line and Wait and See

Japanese leaders are aware, of course, of the extraordinary international changes that have taken place over the past couple of years. They are very uncertain, however, of both the direction and durability of these changes, particularly those connected with the former Soviet Union. The Japanese are far less convinced than most Americans of the permanence of reform and the prospects for a truly benign Russia, and hence are more reluctant to modify their policies. Instead, the Japanese government has adopted essentially a wait-

⁴²The legislation, which went through a torturous process before finally being passed by the Diet, allows the dispatch of a maximum of 2,000 SDF troops, but only as part of UN peacekeeping operations and only for duties not involving the risk of combat. A separate Diet vote of approval is required for each and any troop dispatch, and no involvement in any shooting war is permitted.

⁴³For a similar point, see Masashi Nishihara, "Nakasone's Impact and Japanese Security Policy," *Asian Defence Journal*, January 1989, p. 42.

and-see posture, putting off any major changes in its basic defense orientation while trying to hold the line against increasingly strong downward pressures on defense.

One indication of this posture is the Japanese government's handling of pressures to review the *Taiko*. Since the force structure and equipment requirements called for in the 1976 document had been vastly eclipsed by the extraordinary Soviet military buildup in the Far East during the late 1970s and the 1980s, strong pressure to revise the *Taiko* to facilitate an expanded defense buildup had been developing in defense circles in the latter 1980s. By the end of 1990, however, the dramatic international changes had strengthened calls within Japan for military cutbacks to fit the global trend of reduced international tensions. In the face of this changed climate, the government decided to delay any decision about the *Taiko* until 1995, when the forces identified as required in 1976 for Japan's "basic defense capability" will finally have been attained. Government defense leaders then began talking about the *Taiko* not as a target to be reached, but as the minimum necessary level to be protected.⁴⁴ Noting that the capabilities called for in the *Taiko* were stipulated from the beginning as those required for peacetime, the government has repulsed opposition calls for major defense cutbacks with the argument that the *Taiko* provides the lowest limit permissible to prepare for an emergency situation.

At the same time, the government has tried to maintain a reasonably high rate of defense spending. The growth in Japanese defense spending in FY 1989 and FY 1990, for example, averaged 6 percent annually.⁴⁵ The FY 1991 budget approved by the cabinet allowed for an increase of around 5.5 percent.⁴⁶ Average real annual increases in defense spending between FY 1992 and FY 1995 are expected to be over 3 percent, the lowest level in years but nonetheless noteworthy in light of the changed global situation.⁴⁷ These expenditures allow for continued procurement of sophisticated arms and equipment—

⁴⁴See, for example, "Gekido no kokusai gunji josei no moto," an interview with then JDA Director-General Yozo Ishikawa in *Bungei Shunju*, December 1990, pp. 298–305.

⁴⁵Defense Agency, *Defense of Japan, 1990*, translated by The Japan Times, Ltd., p. 163.

⁴⁶*Yomiuri Shinbun*, December 29, 1990.

⁴⁷*Yomiuri Shinbun*, December 14, 1990.

including AWACS (airborne warning and control system), multiple-rocket launchers, and Aegis-equipped destroyers—albeit at slower rates and reduced levels (see Chapter 3 for details).

Finally, Japanese leaders are continuing their efforts to strengthen U.S.-Japan defense ties. This course is reflected most prominently in increased Japanese financial contributions to the maintenance of U.S. forces based in Japan. The Japanese government has pledged to raise its share of these costs from 39 percent in 1990 to around 50 percent by 1995, and at a time when annual increases in Japanese spending on the SDF are being reduced. Japanese spending for the maintenance of U.S. forces will increase by nearly \$270 million in FY 1991 alone (to more than \$3.3 billion), an increase of more than 8 percent.⁴⁸ Included in these costs is a government commitment to shoulder the entire financial burden for Japanese personnel working at U.S. bases, as well as to pay other yen-based expenses. These continuing increases in Japanese financial support reflect an awareness of the exigencies of the U.S. budgetary situation, as well as an acceptance of Japan's need to assume greater responsibility for the health of the alliance.⁴⁹ They also represent an effort to bind the U.S. closer as Japan deals with the uncertainties of the coming period.

International criticism of Japan's response to the Persian Gulf crisis, and the perceived danger of Japan's international isolation, recently precipitated the major new development in Japanese defense policies discussed earlier—i.e., the government allowed the SDF to participate in UN-led international peacekeeping operations. An early manifestation of this new direction was the belated government agreement to allow SDF aircraft to be used, if necessary, to evacuate refugees from the Persian Gulf. Another was the government's decision to dispatch minesweepers to the region to participate in multinational cleanup efforts. Building on these precedent-establishing steps, the government drafted new legislation in the spring of 1991 (following the previous fall's failed attempt) to permit the SDF to participate in UN peacekeeping forces in the future. This legislation

⁴⁸ *Washington Post*, March 14, 1991.

⁴⁹ See, for example, former Foreign Ministry Vice-Minister Takakazu Kuriyama's eloquent assessment, "Gekido no 90 nendai to nihon gaiko no shintenkaï," *Gaiko Forumu*, May 1990, pp. 12–21.

establishes a Peacekeeping Operations Cooperation Corps that includes SDF members. How much of a departure these steps will be remains to be determined, as suggested above. At a minimum, they can be seen as an effort to build on long-standing Japanese attempts to play a larger international role as a member of the West. If relations with the U.S. deteriorate, however, they could serve as the cutting edge of a more nationalistic Japanese orientation.

Future Expectations: The World Is Not Necessarily Getting Better

As they look to the rest of the 1990s, Japanese defense leaders do not necessarily see the world as getting better. They welcome, of course, the Strategic Arms Reduction Talks (START) Treaty between the former Soviet Union and the U.S., particularly for its limits on long-range Soviet Backfire bombers. But until recently at least, they worried that the Russians might use the START agreement as a reason for increasing their submarine-launched ballistic missiles in the Sea of Okhotsk.⁵⁰ More broadly, Japanese leaders have been concerned about the increasing modernization and concentration of Russian military power in areas immediately around Japan, which they regard as going far beyond what is required for self-defense.⁵¹ Thus, despite the removal from the 1990 and 1991 JDA white papers of the phrase "latent threat" as a characterization of the former Soviet Union, the government does not believe that the threat has disappeared. The 1991 white paper states that "the Soviet capability to threaten the regional security of the Far East still remains intact, although we cannot judge whether the Soviet Union intends to use that capability."⁵² New worries about the adverse consequences of a major upheaval in the former Soviet Union and the presence of thousands of nuclear warheads in unstable republics bolster this sensitivity to the modernization of Russian Far East forces and add to long-standing concerns about the lasting quality of reform in Moscow. Indications that the Russian threat is truly disappearing

⁵⁰See, for example, "Japan Fears SLBM Buildup in Okhotsk," *Daily Yomiuri*, August 2, 1991.

⁵¹*Yomiuri Shinbun*, August 2, 1991.

⁵²Cited in *Japan Times Weekly International Edition*, August 5–11, 1991.

will undoubtedly attenuate Japanese attitudes, but the basic perception of a long-term threat will be much slower to change in Japan than elsewhere.

At the same time, Japanese leaders see many potential sources of *regional* instability. They are particularly concerned about nuclearization on the Korean peninsula, as mentioned above, but they do not rule out the possibility that a nonnuclear, unified Korea could also become a major security worry. Japanese defense leaders do not currently anticipate a threat from China over the coming decade. They are increasingly concerned, however, with China's continuing military—especially naval—buildup and assertive policies in the South China Sea and are examining Chinese intentions. They are also concerned about potential instability and remain sensitive to China's long-term evolution. One lesson they draw from Iraq's invasion of Kuwait is the possibility of smaller-scale military conflict between regional powers in the post-Cold War era. Given Japan's far-flung economic interests and the improved military capabilities of key nations, this possibility is seen as a problem that could grow over the 1990s. The continuing arms buildup in Asia reinforces this growing wariness.

The Japanese are also uncertain about where the U.S. is headed in the region. President Bush's 1990 press-conference explanation of China's importance to the U.S. in terms of its potential as a "balance" against Japan was only one of many statements and actions that have called U.S. long-term intentions into question.⁵³ The Japanese anticipate a significantly reduced U.S. military presence and role in the region over the coming decade. They also expect the U.S. to place greater emphasis on its own economic interests. Together with concern over the frequent U.S. depictions of Japan as America's primary "threat," these expectations feed doubts about the continued U.S. role as Japan's protector.

Finally, the Japanese anticipate slower economic growth and increasing economic difficulties, as well as rising pressures from an aging population, serious manpower shortages and difficulties attracting military recruits, and a more complex domestic political

⁵³For the text of the press conference, see *New York Times*, January 26, 1990.

situation. All of these possibilities point to increased political constraints and a repoliticization of defense issues.

Given these expectations, the Japanese security establishment sees a need for continued improvement in Japan's defense capabilities, but at a slower pace than previously and in line with the exigencies of the domestic political situation. The Japanese also see a need for greater emphasis on domestic R&D and production, partly to improve Japan's bargaining position vis-a-vis the U.S. with regard to technology transfers and partly to hedge against possible developments in the bilateral relationship, but also because of their own domestic budgetary constraints. The Japanese remain committed to the U.S.-Japan Security Treaty and want to make it work. But they also see a need for a more balanced relationship with the U.S., one in which the U.S. treats Japan more as an equal and Japan assumes greater responsibility for the alliance's health. These are some of the key political factors affecting Japan's most likely future direction.

This chapter examines the military component of Japan's security policies, focusing on the current and likely future force structures and capabilities of the Japanese SDF. We begin with a description of SDF threat perceptions and then identify some key characteristics of the SDF. We end with an analysis of the current status and future prospects of the three military services comprising the SDF—the Ground Self-Defense Force (GSDF), Maritime Self-Defense Force (MSDF), and Air Self-Defense Force (ASDF). An attempt is made throughout to provide comparisons between these services and those of other important regional and global powers.

THREAT PERCEPTIONS

Throughout the postwar period, the SDF have viewed the forces of the former Soviet Union, particularly those stationed in the Far East Military District (FEMD), as the primary threat facing Japan. This view is a product partly of historical legacy, partly of the bipolar structure of international politics in the postwar era, and partly of certain peculiarities of Japanese military planning. Like military forces everywhere, the SDF plan on a worst-case basis. What concerns them is not any particular trend in the international environment or the intentions of foreign countries (which, as noted in Chapter 2, can change rapidly), but the military *capabilities* of potential antagonists. Since Constitutional interpretation strictly limits the SDF to defending territorial Japan and the immediately surrounding areas, and the SDF are further constrained by the political requirement of adhering to an exclusively defensive defense (*senshu boei*)

posture (i.e., one proscribing offensive operations), the capabilities that concern the SDF are those of countries that can "get to" Japan. In the postwar period, the former Soviet Union has been the only country with such capabilities.¹ The U.S. view and the official Japanese military view of the regional threat have therefore been essentially the same. The dramatic events that have taken place in the former Soviet Union, Eastern Europe, and the Middle East since mid 1989 have shaken, but not as yet fundamentally altered, this basic view.

As noted in Chapter 2, a central theme of the 1990 and 1991 JDA white papers was that Russian military capabilities around Japan had been considerably enhanced, despite some quantitative reductions, by the acquisition of significant numbers of newer-generation weapon systems.² The JDA argues that the dramatic force reductions and withdrawals that accompanied major arms control agreements and the disintegration of the Warsaw Pact in Europe have no parallels as yet in the Far East. Although Russian ground forces in the FEMD have been reduced by about 5 divisions since 1989, for example, some of the remaining 38 divisions are being modernized with the latest equipment, such as the T-80 main battle tank (MBT). The Russians still deploy some 25 army divisions, about 1,000 tactical fighters, nearly 400 bombers, 75 major surface combatants, and 105 attack submarines in areas near Japan (Sakhalin, Siberia's Maritime Province, the Sea of Okhotsk, and Kamchatka Peninsula). Figure 7 shows the JDA listing of Russian forces deployed near Japan.

The 1991 defense white paper states that "although the recent domestic and international environments of the Soviet Union apparently make it more difficult than before for the Soviet Union to

¹China's nuclear capability is, of course, an exception. But given the Japanese government's ban on nuclear weapons, the SDF are left with no alternative but to rely on the U.S. to handle this threat. For glimpses of traditional SDF threat perceptions and world views, see Ryuhei Nakamura, et al., *Jieitai Tatakawaba* (Oriento Shobo, 1976); Nihon Senryaku Kenkyu Senta, *Kosureba Nihon wa Mamoreru* (publisher and date unavailable); Masao Horie, et al., *Nihon no Boei Senryaku* (Oriento Shobo, 1977); and Hidejiro Kotani, *Boei no Jitai: Boeicho Biggu 4 to no Taidan* (Nihon Kyobunsha, 1972).

²See Defense Agency, *Defense of Japan, 1990 and 1991*, translated by The Japan Times, Ltd.

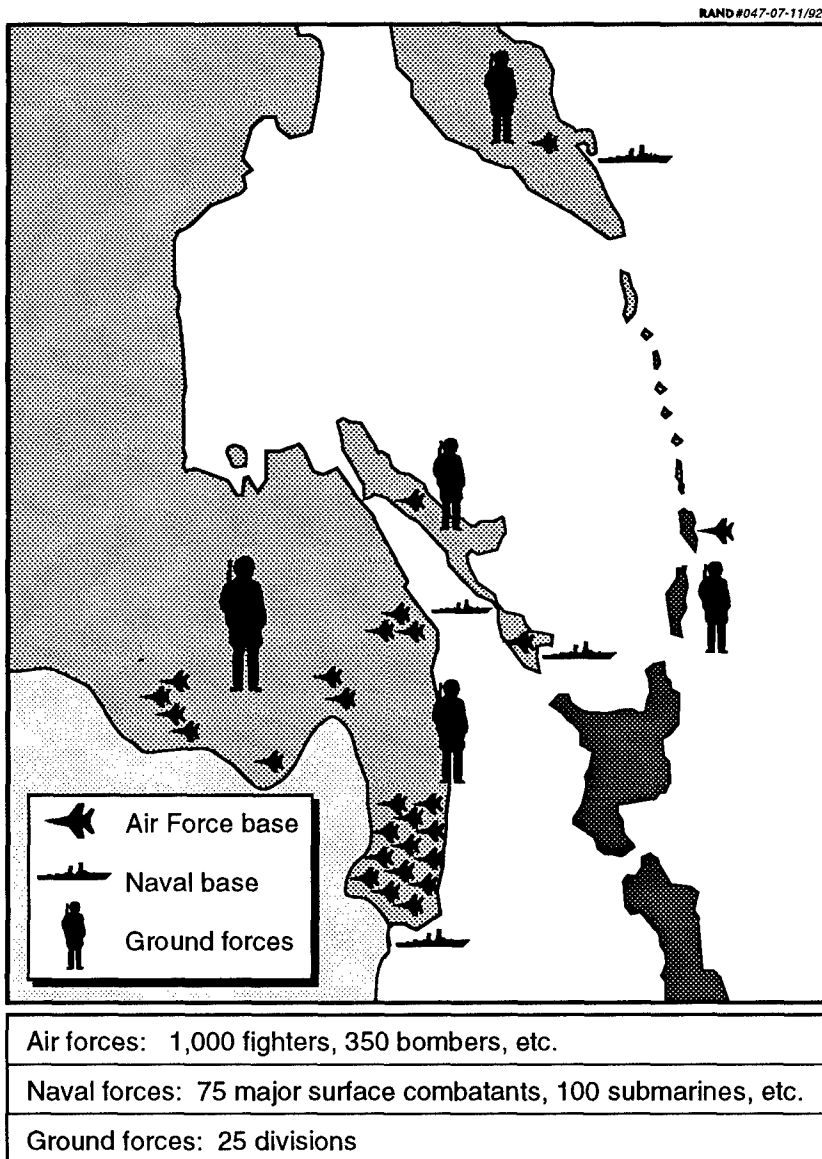


Figure 7—Russian Military Deployments near Japan

conduct aggressive behavior against another country, it remains unchanged that the above-mentioned situation of the Soviet forces in the Far East, makes severe [sic] military environment around Japan."³ In short, SDF planners are focusing on the large threat posed by the forces deployed in the region, rather than on the political changes that have taken place in Russia.

The white papers also point out that such regional powers as North and South Korea, the People's Republic of China (PRC), Taiwan, and the Philippines also have the potential to create political and military instability in the area. This situation, combined with the planned drawdown of U.S. regional forces in the 1990s, provides the Japanese rationale for vigilance and a continued SDF buildup.

Despite this faithful adherence to the traditional force structure rationale and threat assessment, however, the Japanese military is clearly struggling to redefine its long-term *raison d'être*, goals, and missions.⁴ As evidenced by the Japanese response to the Persian Gulf War, the current domestic political realities make an honest and open public debate on these issues extremely difficult.

KEY CHARACTERISTICS

Japan spends far more on defense than any other East Asian regional power (see Chapter 4 for details). Yet at about 1 percent of its GNP, Japan's defense expenditures are relatively modest in comparison to its overall population and economic strength. As Figure 8 shows, when translated into purchase-power parity terms, Japan's defense expenditures appear to be roughly on a par with those of Italy (a mid-level NATO power) and far less than those of the United Kingdom (a leading European NATO power).⁵ Furthermore, small production

³Ibid., p. 30.

⁴For example, see David E. Sanger, "For Japan's Military, Some Second Thoughts About Where the Enemy Is," *New York Times*, July 29, 1990.

⁵These comparisons differ significantly from the widely accepted—and in our view erroneous—portrayal of Japan as the world's "third largest" military power based on simple calculations of Japanese defense budgets in dollar terms. For the variety of reasons described herein, this simple "exchange rate" comparison greatly exaggerates Japan's actual military effort. However, it is important to note that the defense bud-

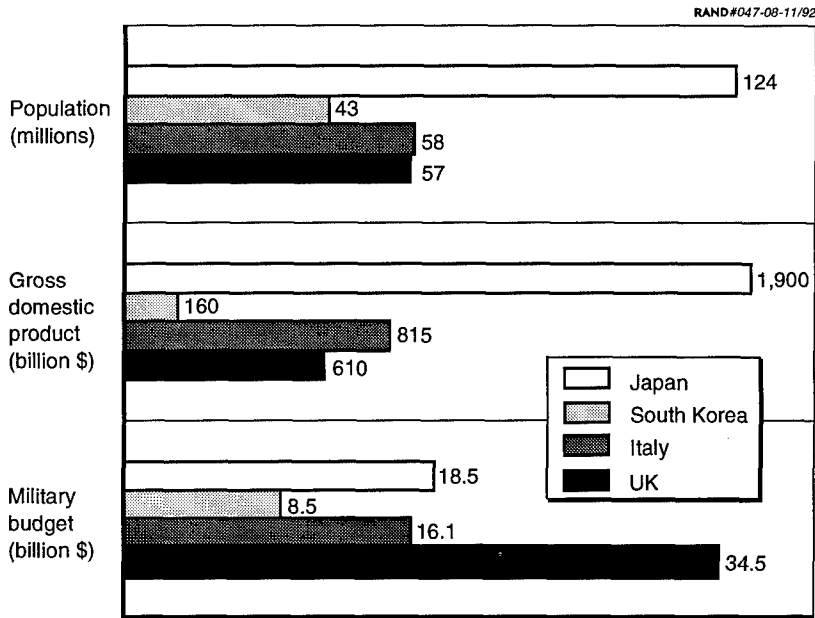


Figure 8—Comparison of Defense Expenditures, 1989

runs and the prohibition against foreign sales make Japanese manufactured weapon systems extremely expensive.⁶ As a result, the overall defense equipment inventory levels are not dramatically greater than those of other leading regional powers. Indeed, with the significant exception of the MSDF inventories, they are considerably below those of the first-tier European NATO countries.

Compared to the military forces of other leading industrialized countries, the SDF have several distinctive characteristics. First, they continue to exhibit a uniquely defensive orientation in doctrine, operational concepts, training, and planning. Second, while boasting increasing numbers of modern, technologically sophisticated

gets and force structures of the leading European NATO countries are expected to decline dramatically in the 1990s, whereas Japan's are likely to continue to rise. For further discussion, see Chapter 4 below.

⁶See Reinhard Drifte, *Arms Production in Japan: The Military Applications of Civilian Technology* (Westview Press, 1986).

weapon systems, the SDF force structure exhibits a serious lack of balance across the full spectrum of modern mission areas and capabilities, particularly in force projection and offensive operations. Third, despite its improved capabilities, the SDF force structure remains relatively small in relation to Japan's overall economic strength.

Finally, the SDF have historically suffered from a series of chronic operational, support, and political problems. Numerous operational shortcomings have long been recognized in the areas of C3 (command, control, and communications), employment and operational concepts, tactics, training, and readiness. Joint planning, interservice relations, and operational integration have never been a strength of the Japanese military, even during and before World War II. Many inadequacies persist in the logistics, sustainability, and survivability of the support and combat infrastructure. And, as noted in Chapter 2, political constraints have placed major restrictions on planning, training, and operations in the postwar era. As a result, the operational and tactical proficiency of the SDF has suffered. Current trends suggest that some of these problems will be mitigated during the 1990s, but a number of fundamental difficulties will remain.

GROUND SELF-DEFENSE FORCE

The GSDF has traditionally been viewed as the premier Japanese service. Historically, however, it has given priority to spending on manpower rather than procurement, and thus is now the least well equipped and probably the least operationally proficient of the three services.⁷

The GSDF leadership is in the process of reexamining the threat and the GSDF's current roles and missions in light of the changes taking place in the former Soviet Union. Initial indications suggest that the threat is perceived as still fundamentally the same, at least on the

⁷The emphasis on manpower over procurement has a long tradition, but in the postwar period it has been rooted in the GSDF's view of itself as the nucleus, or core, of a national resistance to external aggression. Since such a core cannot be built without people, the GSDF has been unwilling to trade off manpower for weapons. See Hidejiro Kotani, *Boei no Jittai: Boeicho Biggu 4 to no Taidan* (Nihon Kyobunsha, 1972), pp. 100-102 and 120-122.

official level. The two key assumptions behind GSDF planning are that the U.S. forward air and naval presence will remain in East Asia and that Russian forces will attempt to secure the Seas of Japan and Okhotsk as part of a "bastion defense" for strategic nuclear ballistic missile submarine (SSBN) operations in times of crisis or war. These assumptions create a conceptual context within which aggression against Japan could take place. While GSDF planners expect a draw-down of U.S. forces in the 1990s, they anticipate that a significant forward presence will be maintained.⁸ Further, Russian deployments of SSBNs in the Far East are expected to remain the same in number or to increase. Although Russian land forces in the FEMD have been reduced, the GSDF argues that mobility and force projection capabilities have not been altered.

Since the early 1980s, GSDF operational planning has increasingly focused on the defense of Hokkaido and northern Honshu. The assumption is that Russian forces would attempt to take control of these areas and the adjacent straits with a multidivision airborne and seaborne assault to secure the Seas of Japan and Okhotsk for SSBN operations. As a result, the GSDF carried out a major reorganization involving the transfer of tanks from Honshu to beef up the four divisions already based on Hokkaido.⁹ However, major new procurements and further reorganization were also seen as necessary for the GSDF to credibly carry out its missions and roles.

⁸The GSDF does not, however, expect substantial U.S. Army assistance in countering a Russian attack. Of the three Japanese services, it maintains the most distant relationship with its U.S. counterpart. Although improvements have been made in recent years, the general GSDF expectation is that it will have to operate autonomously in wartime. For a candid statement of traditional GSDF views regarding U.S. assistance, see General Ryuhei Nakamura's comments in *Jieitai Tatakawaba* (Oriento Shobo, 1976), pp. 155–157 and 173–177. For a more extreme view, which posits U.S. abandonment of Japan in any Japanese conflict with Russia, see Kenjiro Mitsuoka, *Nihon no Rikujō Boei Senryaku to Sono Tokusei* (Kyoikusha, 1979), pp. 124–125.

⁹"GSDF Equipment Procurement Examined," *Gunji Kenkyū*, September 1989, translated by the Foreign Broadcast Information Service, FBIS-EAS-89-217-A, November 11, 1989. Prior to this first major reorganization since 1960, there was a general lack of priority in GSDF deployment decisions. Despite the rhetorical emphasis on Hokkaido, GSDF troops were spread throughout Japan's three main islands. The reorganization in the 1980s represented a major shift in emphasis to the north, with priority clearly given to Hokkaido at the expense of other areas. See, for example, *Jieitai Nenkan 1982* (Boei Nipposha, 1982), pp. 199–201.

In the late 1980s, the GSDF developed a new operational concept called Sea Shore Strike (S3) for the defense of Hokkaido. This concept entailed countering and defeating the invading force at the shoreline, as opposed to the older concept of tactically withdrawing to an interior defensive line and then counterattacking enemy forces once they were ashore.¹⁰ Adoption of this new concept required a shift toward systems with greater long-range striking power.¹¹

Currently, the GSDF has a strong infantry orientation and is comparatively weak in armored and mechanized formations. The *Taiko* established an authorized personnel level for the GSDF of 180,000 troops, which have been organized since 1962 into 12 relatively small infantry divisions of 7,000 to 9,000 men, 1 armored division, and several specialized brigades. However, the GSDF suffers from a chronic shortage of personnel—it is now more than 15 percent under authorized strength. The 2nd, 5th, 7th (armored), and 11th divisions deployed in Hokkaido are nearly full strength, but the remaining divisions are at no more than 65 percent of the authorized levels, with some having fallen virtually to the level of regiments.¹²

In addition to its personnel shortage, the GSDF is equipped with small numbers of MBTs and other armored fighting vehicles (AFVs) compared to armies of comparable size. It deploys only a few more than 1,200 MBTs. Of these, less than two-thirds are the recent-generation T-74s (very roughly equivalent to U.S. M-60s), and most of the remaining one-third are the completely outdated T-61s.¹³ And there is a serious shortage of other AFVs. For example, there are virtually no armored infantry fighting vehicles (AIFVs) and only about

¹⁰The GSDF's traditional strategy derived from, among other factors, the perceived difficulty of defeating an enemy prior to his actual landing and the belief that the GSDF could advantageously use Japan's terrain to defeat an aggressor once he had landed. The strategy was designed to preserve GSDF capabilities and buy time to achieve the "strategic concentration" necessary to launch a counterattack. See Atsuhiko Takeoka, "Nihon no rikujo boei taisei," Kenjiro Mitsuoka (ed.), *Jieitai no Mita Sorengun* (Hara Shobo, 1981), pp. 195–197.

¹¹"JDA to Reduce Tank Force in Next Term Defense Plan," *Nihon Keizai Shimbun*, August 15, 1990, translated in JPRS-JST-90-063-L, October 19, 1990.

¹²"Defense Agency Seeks Reorganization of GSDF," *Japan Times*, December 1990.

¹³The T-74 is considered to be a reasonably good tank for its generation. However, with only a 105-mm main gun and dated subsystems, it most likely cannot defeat the latest deployed Russian tanks, such as the T-72 and T-80.

250 recent-generation (T-73) armored personnel carriers (APCs) on the books.¹⁴ As a result, only the three Hokkaido infantry divisions can be characterized as anything approaching mechanized divisions. They are presently equipped with 46 to 60 MBTs and with mostly wheeled APCs for the infantry.¹⁵

These forces are supported by modest numbers of self-propelled artillery, attack and transport helicopters, multiple-rocket launchers, antitank guided weapons, tactical battlefield missiles, and surface-to-air missiles (SAMs). Few of these systems are current generation, and most have been procured in relatively small numbers by NATO standards. The GSDF is generally considered to possess inadequate combat and operational mobility assets.

The GSDF equipment inventory is modest indeed in comparison to the counterpart inventories of other regional powers. The Russians deploy around 10,000 MBTs in the FEMD, and the PRC's army boasts 7,000 to 8,000 MBTs. But the GSDF inventory lags behind other, smaller powers as well. The South Korean army fields considerably more MBTs than the GSDF, for example, although its tanks are mostly older U.S. M-47s and M-48A5s. The United Kingdom possesses about as many MBTs as Japan, but they are supported by over six times more AFVs of other types, including light tanks, AIFVs, and APCs. Figure 9 compares the GSDF equipment to the equipment of the South Korean, United Kingdom, Italian, and West German armies.

In full recognition of its wide-ranging equipment shortcomings, and to prepare for such possible new operational approaches to defending Hokkaido as the S3 concept, the GSDF developed a detailed equipment procurement priority list in the late 1980s for inclusion in the 1991–1995 Mid-Term Defense Plan. The multiple-launch rocket system (MLRS) emerged as the highest-priority system. Along with the indigenous SSM-1 shore-launched antiship missiles first ordered

¹⁴These numbers are from the International Institute of Strategic Studies, *The Military Balance 1990–91* (London, 1990).

¹⁵"GSDF Equipment Procurement Examined," *Gunji Kenkyu*, September 1989, translated by the Foreign Broadcast Information Service, FBIS-EAS-89-217-A, November 11, 1989.

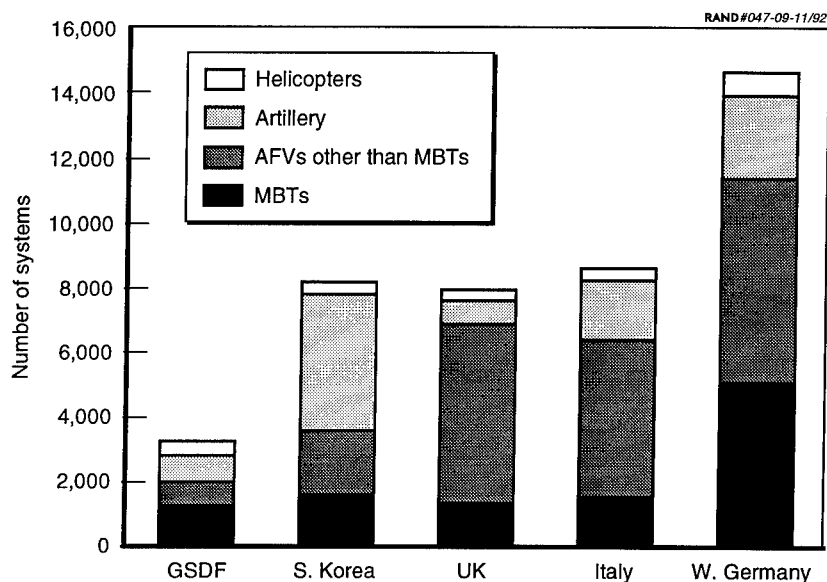


Figure 9—Ground Self-Defense Force: How It Compares

in the 1986–1990 Mid-Term Defense Plan, the MLRS is intended to play a central role in the GSDF operational concept of stopping a seaborne invasion before it lands.¹⁶ Japanese planners identified a requirement for about 200 launcher units over the next ten years to replace the existing 203-mm howitzers and 155-mm cannons. Completion of the earlier planned SSM-1 procurement to replace the existing T-30 SSMs was also considered critical.

The list also included acquisition of up to a total of ten squadrons of advanced attack helicopters (the hope being that at least two squadrons could be equipped with the more advanced AH-64 Apache rather than the older Bell/Fuji AH-1S Cobra) and larger numbers of the CH-47J Chinook (so that an air assault division could

¹⁶First ordered in 1988, the SSM-1 has a range of about 150 km and is roughly comparable to a shore-launched Harpoon. The original plan was to procure 54 launchers for GSDF artillery units, but only about three-quarters of that number were actually ordered.

be formed). The GSDF also stressed the critical need to quickly and fully replace the outdated T-61 MBTs with the technically sophisticated but long-delayed T-90 heavy tanks.¹⁷ Other high-priority items were to improve the organic air defense with the indigenously developed Keiko and SAM-X SAMs and the T-87 twin 35-mm self-propelled anti-aircraft gun (SPAAG) system,¹⁸ and to procure the T-87 *Chyu-MAT* medium antitank missile system with laser designator.

However, the new 1991–1995 Mid-Term Defense Plan's lower annual growth rate and shift in emphasis to providing support and personnel mean that the GSDF equipment requirements will not all be met.¹⁹ Most of the priority equipment requests were funded, but at procurement levels much lower than planned. Major systems will be replaced on a less than one-for-one basis, making overall long-term reductions in force structure inevitable. The plan delays MLRS purchase until FY 1992 and limits total procurement to 36 units, enough to equip only two batteries. An even bigger disappointment to the GSDF is the rejection of any possibility of acquiring the AH-64 or any other new-generation attack helicopter. Instead, the plan authorizes 20 more AH-1S Cobras, for a total of 80, so that a fifth attack helicopter squadron can be formed.

Another serious blow from the GSDF's perspective is the extremely small numbers of T-90 MBTs authorized by the plan. Only 132 new MBTs will be funded over the plan's next five years, compared to the

¹⁷The T-90 MBT is lighter and smaller but similar in appearance to the German Leopard II. It appears to be an impressive tank that includes such state-of-the-art features as composite armor, a German-developed 120-mm main gun, and an automatic gun loader. However, it has been reported that the tank will cost on the order of three times more than the U.S. M-1 Abrams, considered by many to be the best in the world. See "Type 90: A Milestone for Japanese Industry," *International Defense Review*, June 1991; Kensuke Ebata, "Japanese Type 90 on Display," *Jane's Defence Weekly*, August 25, 1990; and Caleb Baker, "Japan Packs New Tank with Advanced Features," *Defense News*, December 3, 1990.

¹⁸The Keiko SAM is a Stingerlike man-portable system; the SAM-X is intended to replace the current I-Hawk SAM. See Robertz Karniol, "Japan to Develop SAM System," *Jane's Defence Weekly*, October 13, 1990.

¹⁹Summaries of the main features of the 1991–1995 Mid-Term Defense Plan are widely available in the press. For example, see "Japan's Spending Plans for The Next Five Years," *Jane's Defence Weekly*, January 12, 1991; "Japan Approves Five-Year Defense Spending Plan," *Aviation Week and Space Technology*, January 7, 1991; and "New Hardware Buys to Shrink in Japan," *Defense News*, February 18, 1991.

246 MBTs (including 30 T-90s) purchased during the previous mid-term plan. T-61 MBTs will be replaced at a ratio of about two for three. Thus, since about 210 T-61s and 74 other MBTs are slated for retirement during the same period, the total tank inventory will decline by some 70 MBTs to around 1,135.

In addition, the plan authorizes 218 other types of sorely needed AFVs, including the T-89 mechanized infantry combat vehicle (MICV)²⁰ and the T-87 wheeled reconnaissance vehicle. However, the anticipated procurement rate for T-89 MICVs will hardly rectify the GSDF shortcomings in this area: only 17 T-89 MICVs were authorized in FY 1990, and only 9 in FY 1991.

Other approved purchases include 14 Boeing/Kawasaki CH-47Js, which will increase the current force to 42 and allow the existing Boeing/Kawasaki KV-107 transport helicopters to be replaced at a ratio of about four for five. Increased purchases of the HU-1H improved Huey utility helicopter are also envisioned in the plan, with the possibility of adding another more capable platform (UH-X requirement) that is based on a modified version of the MSDF SH-60J. The plan also gives the go-ahead for three units of SSM-1s, each with 16 missiles.

Thus, the GSDF will begin to procure some of its long-anticipated newer-generation equipment over the next five years, but at a painfully slow pace and in small numbers. On the other hand, the impressive breadth of the GSDF modernization program should not be ignored. For the first time, the GSDF will start receiving a broad spectrum of modern sophisticated systems, including the T-90 MBT, T-89 MICV, T-87 SPAAG, and a wide variety of helicopters, tactical missiles, and artillery support systems. A more rapid procurement pace could quickly transform the GSDF into a modern, well-equipped force. As currently envisioned, however, the equipment inventories will gradually decline as older systems are replaced on a less than one-for-one basis. In 1995, at the end of the new plan, for example, the GSDF will still have only slightly over 100 top-line

²⁰The T-89 MICV, armed with 35-mm cannon in a turret, is roughly similar to the U.S. M-2 Bradley AFV. See Christopher Foss, "New Japanese Armour Unveiled," *Jane's Defence Weekly*, December 8, 1990.

MBTs, will have no current-generation attack helicopters, and will still have only sparse holdings of other AFVs.

Probably the single biggest problem the GSDF will face over the next decade is maintaining its personnel levels. Even with the currently available recruiting pool of 4.2 million 18 to 24 year olds, the GSDF has not been able to attain its authorized personnel levels, and the pool is projected to decline to 3 million by the year 2000. This demographic reality, combined with reduced international tensions, has led to widespread discussion of GSDF downsizing and reorganization. The proposals typically call for authorized personnel strength to be reduced by 10 to 15 percent.²¹ This lesser size would more accurately reflect the actual size of the current GSDF, but it would have the effect of reducing the authorized equipment inventory levels. Planners speak of reorganizing the current 13 divisions as 9 to 11 divisions and 7 to 9 independent brigades, and of creating 1 or 2 light divisions that have greater air mobility. Whatever the final outcome, the GSDF personnel and equipment inventories are almost certain to decline because of the demographic situation and the reduced equipment procurement rates.

Many foreign observers see the GSDF as the least operationally proficient of the three SDF services. This view stems partly from the Japanese political restrictions that limit the realism of the GSDF's exercises, from the dearth of adequate training areas and facilities, and from shortcomings in the types and quantities of available equipment. There are few indications that this situation will change dramatically over the course of the 1991-1995 Mid-Term Plan.

MARITIME SELF-DEFENSE FORCE

With 62 principal surface combatants, over 30 coastal mine warfare ships, 16 submarines, and nearly 150 fixed- and rotary-wing combat aircraft, the MSDF is Asia's largest and most capable regional naval force and, in certain respects, ranks with the world's leading navies. It deploys more escort ships, mine warfare units, and submarines than any other regional force, including the U.S. Seventh Fleet. Indeed, the MSDF force structure boasts more principal surface

²¹"Defense Agency Seeks Reorganization of GSDF," *Japan Times*, December 1990.

combatants than any European NATO navy, including the British Royal Navy, the premier European NATO naval force.

Most observers agree that the MSDF is the most operationally proficient of the three Japanese services, in part because of its long postwar tradition of working closely with the U.S. Navy.²² It may, however, be the least capable of the three in terms of conducting fully autonomous operations. Like the GSDF and ASDF, it has an unbalanced force structure, having been optimized for specific roles for combined operations with the U.S. Navy. Severe shortcomings in munitions stockage, underway fleet support, and base survivability undermine its potential wartime effectiveness.²³

For most of the postwar period, the MSDF has concentrated on two central roles: antisubmarine warfare (ASW) and mine countermeasures (MCM). Most of its principal surface combatants are optimized for ASW or are ASW capable. Virtually all of its combat aircraft (primarily the Kawasaki license-produced P-3C Orions and helicopters) and most of its submarines are mainly ASW platforms. The majority of the remaining combat ships focus on MCM operations.²⁴

Japanese naval forces are tasked with four primary wartime missions. The first mission is to protect Japan's sea lines of communication (SLOCs), a task that primarily entails cooperating with the U.S. Navy in protecting merchant ships, with a focus on ASW operations. This mission has grown in prominence since Japan's official agreement in 1981 to take primary responsibility for the defense of its SLOCs from its major ports out to 1,000 miles (approximately from Tokyo to Guam and the Philippines). The second mission is to assist in countering a Russian seaborne attack on Hokkaido and northern Honshu; the third is to escort merchant vessels and MCM ships in coastal waters. The fourth, and final, mission is to deny Russian naval forces

²²For decades, U.S. Navy and MSDF forces have been collocated at Yokosuka and Sasebo.

²³An excellent overview of the MSDF can be found in G. A. Rubinstein and J. O'Connell, "Japan's Maritime Self Defence 1990," *Naval Forces*, No. 2, 1990. On the early development of the MSDF, see James Auer, *The Postwar Rearmament of Japanese Maritime Forces, 1945-71* (Praeger, 1973).

²⁴See Gene D. Tracey, "Japan's Naval Forces in the 1990s," *Asian Defence Journal*, May 1990; and Antony Preston, "Japan's Maritime Self Defence Force in the 1990s," *Asian Defence Journal*, September 1989.

based at Vladivostok, Vlad Olga, and Sovetskaya Gavan access and transit through the three straits around Japan (Soya between Sakhalin and Hokkaido, Tsugaru between Hokkaido and Honshu, and Tshushima between Japan and Korea).²⁵ Undoubtedly, mission priorities will shift if the Russian threat continues to fade.

The majority of the MSDF principal surface combatants are organized into four flotillas of eight destroyers and eight ASW helicopters to carry out the primary SLOC defense mission. The remaining principal surface combatants, supported by two submarine and two MCM flotillas, are assigned to regional district commands for use in coastal escort and mine warfare operations. The combat aircraft are organized into eight maritime patrol aircraft (MPA) squadrons, five equipped with about 50 Lockheed/Kawasaki P-3C Orions, and three equipped with the aging P-2J Neptunes. Six ASW helicopter squadrons fly 60 Sikorsky HSS-2As.

The MSDF dominates all the regional nonsuperpower navies in East Asia in terms of total tonnage and equipment capabilities. The South Korean Navy deploys only about half the number of principal surface combatants deployed by the MSDF, with a combined tonnage that is only about one-third the Japanese level. The PRC Navy poses a significant submarine threat, but its surface combatants would be no match for those of the MSDF. The regional Russian naval forces, however, are substantial, with approximately 75 principal surface combatants (including 2 aircraft carriers and 15 cruisers) and over 100 submarines, most nuclear powered, operating in the seas around Japan.²⁶

While impressive in overall size and capabilities, the MSDF force structure is, as stated earlier, unbalanced—it has major weaknesses in certain key mission areas and capabilities. As with the other two services, these shortcomings are primarily the product of political restrictions, role specialization, and the division of tasks with U.S. forces. But in the case of the MSDF, the last of these three factors plays a greater role in the imbalance, because the MSDF's force structure and mission planning have historically been tied more

²⁵G. A. Rubinstein and J. O'Connell, "Japan's Maritime Self Defence 1990," *Naval Forces*, No. 2, 1990.

²⁶Defense Agency, *Defense of Japan*, 1991, translated by The Japan Times, Ltd.

closely to combined U.S.-Japan operational concepts. Indeed, in contrast to the practice of the other two services, all official MSDF contingency plans are based on combined operations with U.S. forces. The U.S. Seventh Fleet is counted on to provide capabilities the MSDF lacks.

The force posture shortcomings that significantly limit the MSDF's ability to operate autonomously are fleet air defense, power projection, amphibious operations, and long-range submarine operations.²⁷ These shortcomings are evident when the MSDF force structure is compared to that of a leading NATO navy, such as the Royal Navy, or even that of a mid-tier NATO navy, such as the Italian Navy. As Figure 10 shows, the MSDF falls about halfway between the British and Italian navies in total tonnage. The Italian Navy, much smaller in total tonnage than the MSDF, nonetheless operates an aircraft carrier (the *Garibaldi*) for fleet air defense and several large

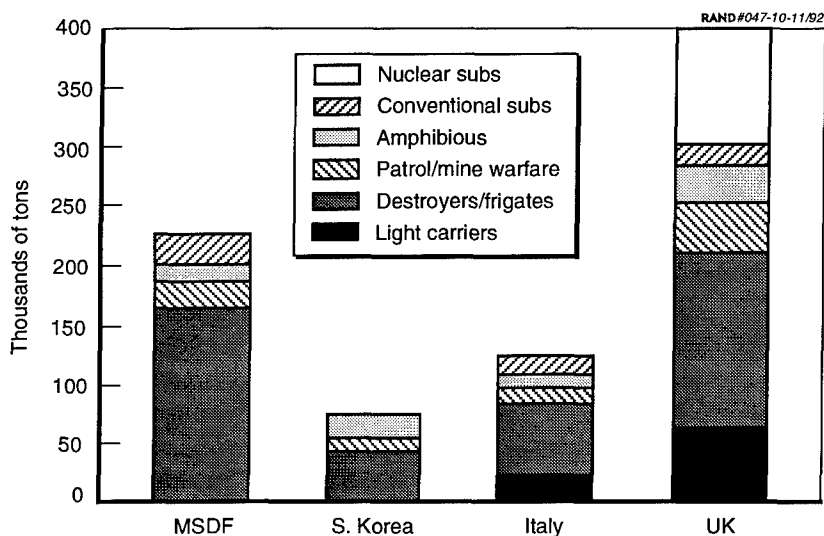


Figure 10—Maritime Self-Defense Force: How It Compares

²⁷G. A. Rubinstein and J. O'Connell, "Japan's Maritime Self Defence 1990," *Naval Forces*, No. 2, 1990.

cruisers. The Royal Navy deploys fewer principal surface combatants than the MSDF but considerably exceeds the total MSDF tonnage. It is capable of truly autonomous conventional operations, as well as strategic nuclear operations. Its force structure includes 2 Harrier-equipped carriers (with a third in reserve), 17 nuclear attack submarines, 4 SSBNs, and numerous amphibious assault and support ships.

Throughout the last two decades, senior Japanese naval leaders have unsuccessfully sought to acquire at least a small aircraft carrier. They have emphasized the need for a carrier primarily to enhance fleet air defense, although such an acquisition would also provide a boost for power projection capabilities. Currently, MSDF destroyers are equipped with only medium-range and point defense anti-air warfare (AAW) systems such as the Tartar/Standard SM-1 SAM system, the Sea Sparrow SAM, and the Phalanx close-in weapon system (CIWS) gun. A large air attack, particularly by bombers launching antiship air-to-surface missiles (ASMs) from beyond Tartar/Standard range, could saturate an MSDF flotilla's air defenses. Thus, the MSDF is entirely dependent on the ASDF and U.S. Navy carriers for long-range air defense. To partially rectify this situation, the MSDF began procuring four U.S.-designed Aegis air defense cruisers during the 1986-1990 Mid-Term Defense Plan and plans to develop and procure an over-the-horizon-backscatter (OTH-B) early warning radar system for placement on Iwo Jima. Aegis and OTH-B alone, however, will not solve the problem of long-range air defense. Further, the original MSDF requirement for eight Aegis cruisers may be reduced to as few as four, providing only one AAW cruiser per flotilla.²⁸

Senior MSDF officers still regard the acquisition of carriers as a critical long-term requirement for filling a major capability gap. In essence, the carrier is seen as the key to autonomous operations, independent of both the U.S. Navy and the other Japanese services. The MSDF is reticent to remain so heavily dependent on the U.S. Navy for its long-range AAW in an era of U.S. retrenchment. And because of a history of poor coordination and cooperation with the

²⁸Michael Green, "Despite Aegis, Japan Will Still Depend on the U.S. Navy," *Defense News*, August 13, 1990.

other services, the MSDF is probably even more reticent to hand over the responsibility for long-range fleet air defense to the ASDF, particularly since the ASDF does not yet possess the capability to provide it (see below). Consequently, the MSDF continues to study carrier options. The most commonly mentioned is a 10,000- to 20,000-ton through-deck cruiser similar to the Italian *Garibaldi* or the British Invincible-class carrier equipped with about ten Harrier-type VSTOL (vertical/short takeoff and landing) aircraft and a like number of rotary-wing aircraft.²⁹ As a possible fallback or interim solution, planners have also seriously studied the possibility of stationing McDonnell-Douglas/British Aerospace Harrier AV-8Bs on MSDF destroyers equipped with "ski-jump" decks for takeoff.³⁰

Another area the MSDF leadership has long wanted to upgrade is attack submarines. The conventionally powered submarines the MSDF now deploys are high-quality designs that are adequate for blocking passage through the three major straits around Japan. However, to support more autonomous fleet operations aimed at protecting critical SLOCs far from home, the endurance, range, speed, and maneuverability of nuclear attack submarines (SSNs) are critical. Interest in procuring SSNs is strong in some quarters of the MSDF. The Japanese civilian leadership, however, continues to view the acquisition of both carriers and SSNs as politically infeasible. Carriers are perceived by many, both at home and abroad, as offensive weapons.³¹ And the use of nuclear power for military purposes, even for propulsion, is a particularly sensitive issue in Japan.³²

With these requirements in mind, the 1991–1995 Mid-Term Defense Plan is somewhat disappointing from the MSDF perspective, especially in that it provides no funds for a carrier. Instead, it essentially fleshes out the existing modernization plans while providing no major new systems or capabilities. The overwhelming emphasis is on further enhancement of capabilities in the traditional ASW mission

²⁹See Simon Elliot, "JMSDF Looks for Carrier Help," *Flight International*, July 11–17, 1990.

³⁰"Japan," *AAS Milanews*, August 1990.

³¹It is also alleged that the U.S. has opposed Japanese acquisition of carriers and pushed for procurement of Aegis as a substitute.

³²Naoaki Usui, "Japan Ponders Politics of a Nuclear Navy," *Defense News*, July 8, 1991.

area.³³ Moreover, the plan's objectives for the MSDF are pared down (as part of the LDP-DSP-Komeito accord mentioned in Chapter 2) to compensate for the unanticipated expense of Japanese contributions to the allied war effort in the Persian Gulf. The MSDF's original request for 14 new destroyers has been dropped to 10, which means the MSDF force structure will decline by 4 destroyers by 1995, leaving 58 principal surface combatants rather than the current 62.³⁴

The plan envisions 10 new principal surface combatants—two 7,200-ton Yukikaze-class Aegis AAW destroyers and eight 4,400-ton Asagiri-class ASW destroyers of a new design—to replace 14 older ships slated for withdrawal from front-line service. It also includes further research on, but no procurement of, the OTH-B radar. The JDA plans to support the development of the XSSM-1B (a new ship-to-ship missile based on the land version, the SSM-1) as an eventual replacement for the Harpoon, to acquire five new 2,450-ton Yushio-class conventional attack submarines to replace older submarines on a one-for-one basis, and to develop a new ASW torpedo. Thirty-six SH-60J Sea Hawk ASW helicopters have been authorized in order to continue replacing the existing shipborne HSS-2Bs on a one-for-one basis, and a handful of P-3 Orions are to be ordered to complete the planned acquisition of 100. Orders for three EP-3 electronic intelligence (ELINT) collection versions are also anticipated, along with two UP-3 training support aircraft. MSDF planners also hope to purchase four V-22 Osprey tilt-rotor aircraft (even though the U.S. development program has been halted because of budget cuts) so that they can be evaluated for search and rescue and possibly long-range ASW operations.

Numerous smaller combat and support ships totaling over 34,000 tons will be ordered during the 1991–1995 Mid-Term Plan. Among them will be ocean-going MCM ships, fast missile patrol boats, minelayers, and training ships. Not least important of this group will be such support vehicles as the 8,500-ton Towada-class fleet

³³Naoaki Usui, "Japan Plans to Bolster Already Formidable ASW Capability," *Defense News*, June 24, 1991.

³⁴Kensuke Ebata, "War Aid May Sink JMSDF Plans," *Jane's Defence Weekly*, February 23, 1991. In partial compensation for the reduced number of first-line ships, the JDA hopes to transfer 13 of the older destroyers to reserve coastal guard duty. These ships would remain in active service but at lower manning and readiness levels.

oiler/replenishment ships, which are critical if the MSDF is to rectify its serious shortcomings in underway fleet replenishment and support. The plan will also begin to address some other problem areas, such as an almost total lack of organic air defense at naval air stations.

All in all, the plan will add considerable new capabilities to an already large naval force, paying overdue attention to many long-standing support and operational deficiencies. However, it will not fundamentally alter the MSDF's basic character as a highly specialized force focused overwhelmingly on the ASW and MCM roles. The overall force structure imbalances that create capability gaps in fleet air defense and power projection will remain and will not be ameliorated until the political prohibitions against procuring aircraft carriers and SSNs diminish. Without carriers, a major challenge for the MSDF in the 1990s will be to vastly improve coordination and joint operations with the ASDF in order to provide long-range air defense in support of the MSDF 1,000-mile SLOC protection mission.

Like the other Japanese services, the MSDF continues to suffer from insufficient war reserves of consumables and spares, politically restricted planning and training, an inadequate and vulnerable support infrastructure, and poor coordination with its sister services. The MSDF will also be hard hit by growing manpower and recruitment problems, although certain remedial actions are being taken.³⁵ All of these problems, combined with the force structure imbalances, dramatically reduce the MSDF's ability to conduct credible autonomous operations.

AIR SELF-DEFENSE FORCE

The Japanese ASDF shares many general attributes with its two sister services. It is a modern, medium-sized air force equipped with some of the most advanced, capable platforms in the world. Its force structure, doctrine, training, and tactics are heavily skewed toward

³⁵For example, the new Asagiri-class destroyers are 30 percent larger than the old ones but require almost one-third fewer crew members to operate because of increased automation of the ship's operating systems. See Kunio Kotaki, *Navy International*, March 1991, p. 84.

defensive operations. It does not possess a robust and survivable support structure by Western standards, and it stockpiles insufficient war reserves of consumables and spares. According to knowledgeable outside observers, the ASDF's operational proficiency is only adequate, falling somewhere between that of the MSDF and GSDF.

Traditionally, the ASDF threat assessment has been identical to that of the U.S. Air Force and the 5th Air Force headquartered at Yokota. The threat is seen as consisting of nearly 1,000 Russian tactical fighters and just under 400 long-range bombers, most based near Vladivostok, Khabarovsk, and Sovetskaya Gavan, close to Hokkaido and northern Honshu. Of special concern are the increasing numbers of fourth-generation Russian tactical fighters and modern bombers, such as the Tu-22M Backfire equipped with air-launched cruise missiles (ALCMs).

Like their counterparts in the other services, ASDF planners do not anticipate a dramatic change in the potential threat: the global strategic environment may have changed, but the Russians and other regional powers continue to upgrade their air forces. Around 300 aging Russian tactical fighters (mostly MiG-21s) have recently been withdrawn from the region, but they have been replaced by almost 100 MiG-31s and other new fighters, adding to the growing inventory of modern tactical aircraft that includes the MiG-29 Fulcrum and the Su-27 Flanker. Nearly all the third- and fourth-generation Russian fighters have the operational range to conduct combat operations over all of Japan. The ALCM-equipped Backfires, Tu-142 Bears, and other bombers are capable of striking anywhere in Japan and far out to sea against Japan's critical SLOCs.³⁶

The ASDF has historically focused on two broad defensive roles: homeland air defense (priority 1) and air-to-surface support operations to counter amphibious landings (priority 2). Until the 1980s, the ASDF air defense concept was heavily oriented toward close-in defensive counter-air (DCA) operations. A much lower emphasis was placed on antiship support and general tactical support of maritime operations (TASMO) conducted by the MSDF, and the lowest emphasis was on air support of GSDF forces engaged in

³⁶See Defense Agency, *Defense of Japan*, 1991, translated by The Japan Times, Ltd.

repelling an amphibious invasion, which mostly entailed what NATO calls close air support (CAS) and battlefield air interdiction (BAI).

Once the 1980s arrived, however, more-robust air defense concepts and capabilities became necessary to address the growing Soviet offensive air threat and amphibious assault capabilities and the additional post-1981 responsibility for helping the MSDF defend Japanese SLOCs out to 1,000 miles. The ASDF air defense perimeter had to be considerably extended offshore to permit interception of Soviet bombers prior to ALCM launch, to establish an air defense barrier for protection of SLOCs to the south and east, and to improve counter-invasion TASMO. More attention was also given to the support of GSDF forces defending against an amphibious assault in Hokkaido. In spite of these changes in emphasis, however, the ASDF remained overwhelmingly defensive in missions and roles.

The current ASDF force structure is in the final stages of major modernization programs launched in the late 1970s and early 1980s to meet the growing Soviet threat and accommodate new ASDF responsibilities. In accordance with the 1976 *Taiko* force level objectives, the ASDF currently deploys a tactical fighter force of six squadrons of McDonnell-Douglas/Mitsubishi F-15J/DJ Eagles and four squadrons of McDonnell-Douglas/Mitsubishi F-4EJ Phantoms in the dedicated air defense role, three squadrons of Mitsubishi F-1 support fighters, and one squadron of RF-4EJ Phantoms in the tactical reconnaissance role.³⁷ Aerial early warning (AEW) is provided by one squadron of ten Grumman E-2C Hawkeyes. Three fixed-wing tactical transport squadrons are equipped with Lockheed C-130H Hercules, NAMC/Kawasaki C-1s, and NAMC YA-11s. These are supplemented by a small number of Boeing/Kawasaki CH-47J heavy-lift helicopters. Several specially equipped YS-11s and a C-1 make up an electronic warfare (EW) flight. Search and rescue duties are undertaken by Mitsubishi MU-2s and KV-107 and CH-47J helicopters. An

³⁷Two F-15J squadrons are based at Chitose Air Base in Hokkaido, two are in central Japan at Hyakuri and Komatsu, and two are in southern Japan at Nyutabaru and Tsuiki. F-4EJs are based at Hyakuri, Komatsu, and Nyutabaru Air Bases, and a Phantom squadron flies out of Naha in Okinawa. Two squadrons of F-1s are collocated with U.S. Air Force F-16s at Misawa, while a third is in the south at Tsuiki. See "JASDF Spending in FY90 Examined," *Air World*, April 1, 1990, translated in JPRS-JST-90-030-L, May 15, 1990.

"aggressor" air combat training squadron flies Mitsubishi T-2 trainers and some F-15Js.

Ten other training squadrons include in their inventories Fuji T-1, Mitsubishi T-2 (for operational conversion), and Kawasaki T-4 basic/intermediate trainers, as well as a considerable number of aging T-33s. The primary ASDF-operated SAM is the dated Nike-J. It equips 18 squadrons and is now being replaced by the Patriot.³⁸

This force structure strongly reflects the ASDF's defensive posture. Of the 14 fighter attack squadrons, 10 are dedicated to DCA missions and 3 have air defense as a primary role. There are no dedicated ground attack fighters or bombers in the ASDF inventory. The primary air-to-surface mission of the F-1s is attacking ships with the ASM-1 antiship missile. The ASDF stocks no sophisticated air-to-ground munitions, although the F-1s are assigned the nominal secondary role of providing ground support for GSDF operations.

A sense of the relative size and balance of the ASDF force structure can be gained by comparing it to the force structures of other mid-sized air forces. Figure 11 compares the current ASDF force structure, and some projections for 1995 and 2000, to the existing air force structures of South Korea and two European NATO allies. All three of these foreign air forces are considerably larger than the ASDF, both in number of squadrons and total number of combat aircraft.³⁹ The ASDF F-15J is a more capable aircraft than the domi-

³⁸Detailed summaries of the ASDF force structure can be found in "Japanese Air Self Defense Force," *AAS Milavnews*, May 1988; and John W. R. Taylor and Kenneth Munson, "Gallery of Asian and Pacific Air Power," *Air Force Magazine*, November 1990.

³⁹This comparison uses squadrons rather than actual aircraft for the sake of simplicity. The fighter aircraft actually operationally available in any given squadron vary widely over time, from air force to air force, and among various aircraft types within each air force. In addition, detailed numbers are classified. To simplify the problem and avoid having to deal with classified numbers, we use squadrons as a broad indicator of force size and role emphasis. According to one standard open source, the total numbers of combat aircraft in each of these air forces are as follows: Japan, 387 plus 50 in storage; Italy, 425 plus 80 in storage; South Korea, 469; United Kingdom, 538 plus 319 in storage. See International Institute of Strategic Studies, *The Military Balance, 1990-91* (London, 1990).

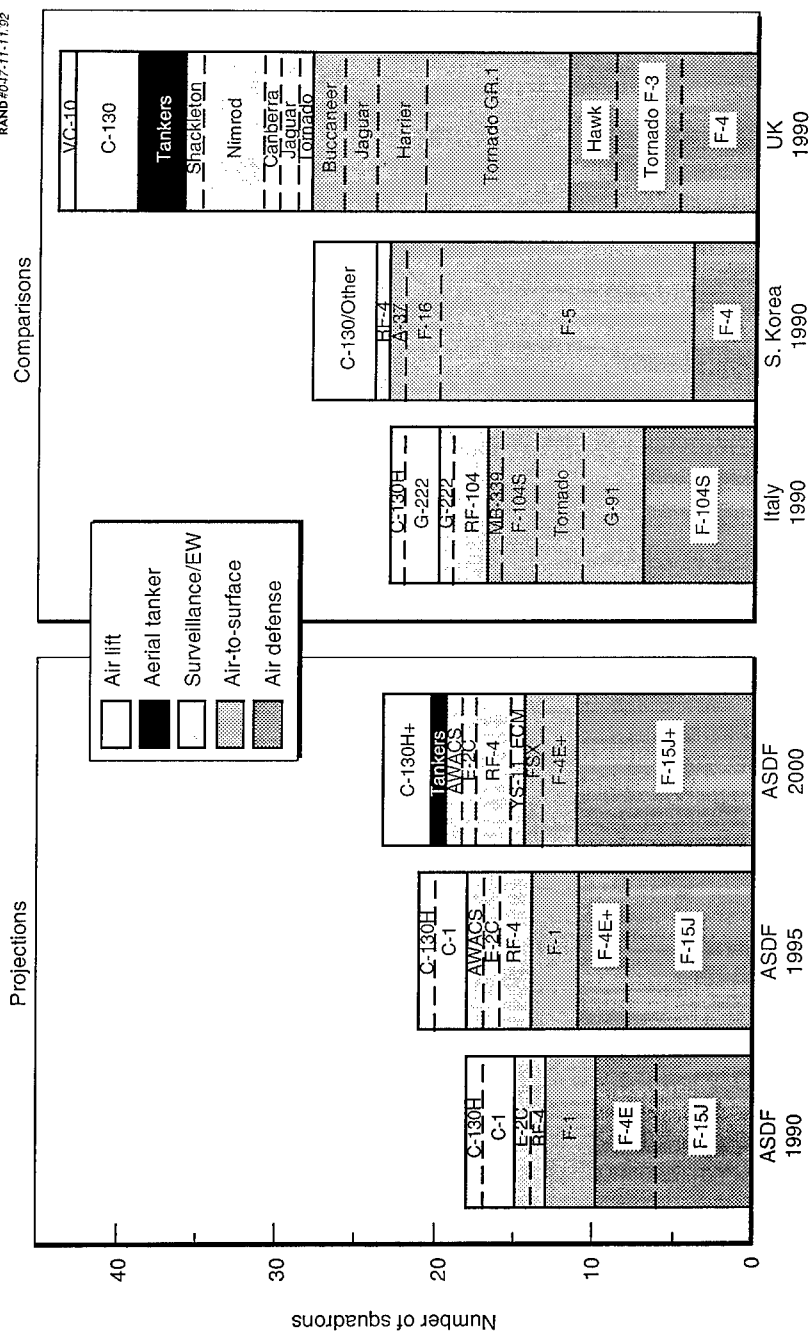


Figure 11—Air Self-Defense Force: Projections and Current Comparisons

nant first-line fighter-interceptor in any of these other foreign air forces, particularly South Korea's Northrop F-5E Freedom Fighter. Nonetheless, the force structures of these other air forces are clearly more balanced and well rounded. More in line with most air forces of the world, they dedicate the majority of their tactical fighter squadrons to multirole (air-to-air and air-to-ground) and attack missions. A full-spectrum air force such as the Royal Air Force also devotes a considerably greater number of assets (such as aerial tankers and surveillance and EW platforms) to the support of defensive as well as offensive operations.⁴⁰

In setting their objectives for the 1991–1995 Mid-Term Defense Plan, ASDF planners primarily focused on completing the acquisition of equipment needed to meet the requirements established in the 1980s for improving ASDF air defense and anti-invasion capabilities. To further extend the air defense perimeter and establish the air defense barrier for long-range SLOC protection, and to improve low-altitude air defense, the planners identified three key procurement priorities.

The first two major priorities were to acquire additional F-15J fighter-interceptors and a small number of aerial tankers for support. JDA studies in the late 1980s, particularly following the findings of the 1987 research effort conducted by the Ocean Air Defense Group, suggested that additional F-15s and 10 to 20 aerial tankers were needed to fulfill the new responsibilities for an offshore air defense barrier.⁴¹ The JDA had originally authorized procurement of the F-15J in the late 1970s as the primary ASDF fighter-interceptor to replace the aging Lockheed/Mitsubishi F-104J Starfighters and later F-4EJs.⁴² Although total procurement numbers were modified

⁴⁰However, it should be noted that we anticipate a decline of 20 to 40 percent in the fighter-attack aircraft inventories of NATO's Central Region European air forces by the end of the 1990s. For a discussion of the current and projected structures of the Royal Air Force and other NATO Central Region European air forces, see Mark Lorell, *The Future of Allied Tactical Fighter Forces in NATO's Central Region*, R-4144-AF (RAND, 1991).

⁴¹"Japan Studies Oceanic Air Defense Option," *Flight International*, February 18, 1989.

⁴²Japan is the only foreign nation granted a license to manufacture the F-15, the U.S. Air Force's current top-of-the-line fighter. Only two other countries, Israel and Saudi Arabia, have been permitted to procure the aircraft for their air forces.

several times, the 1986–1990 plan finally established an objective of 162 F-15Js organized into seven squadrons, permitting an operational strength of 18 aircraft per squadron to be maintained. About 138 of these had been scheduled for delivery by the end of FY 1990.

The ASDF's request for the 1991–1995 plan called for about 60 additional F-15Js, for a total of more than 220. The objective was to permit an eighth F-15J squadron to be established by FY 1997 and to continue the existing plans for expansion of all F-15 squadrons to an operational strength of 22 aircraft each.⁴³ This expansion would in effect increase the ASDF force structure by one squadron without going beyond the formal squadron numbers identified in the *Taiko*. To extend the on-station endurance of the F-15s, aerial tankers were requested, the leading candidates including the Boeing KCE-3J based on the B707, the McDonnell-Douglas KC-10, and the Lockheed KC-130. ASDF planners well understood, however, the domestic political sensitivities to the procurement of aerial tankers. As in the case of aircraft carriers, substantial elements of the Japanese body politic view tankers as providing the SDF with an unacceptable potential for offensive operations.⁴⁴

The third major air defense procurement priority was to acquire about 12 to 14 AWACS aircraft for long-range surveillance and early detection of offensive air attacks for the 1,000-mile SLOC defense mission. The operational concept driving this requirement called for three continuously maintained surveillance orbits. Candidate aircraft included Boeing E-3s, upgraded E-2Cs, and modified versions of the P-3 and C-130. Most observers assumed that JDA officials would select the E-3 because of its greater capability and wide use in Europe, complemented by the KCE-3J tanker based on the same B707 airframe.⁴⁵

⁴³See "1991 Self Defense Forces Aircraft Procurement," *Air World*, April 1991, translated in JPRS-JST-91-032-L, June 27, 1991; and "Japan Expands F-15 Units," *Flight International*, September 23, 1989.

⁴⁴"Air Defense Force Plans to Extend its Reach," *Interavia Aerospace Review*, December 1990.

⁴⁵The AWACS and tanker requirements are a product at least in part of U.S. pressure on Japan with regard to burden-sharing issues and the 1,000-mile SLOC defense agreement. These requirements are also entangled with U.S.-Japan trade issues, since AWACS and tanker purchases would be very expensive off-the-shelf purchases from Boeing. Members of the U.S. Congress have publicly insisted that Japan's military

The ASDF also planned to continue with its major F-4EJ service life extension program (SLEP), the main focus of which was on improving the avionics capabilities of its Phantoms and extending their operational life another decade. The first upgraded F-4EJ Kai (improved) was ordered in FY 1987; first deliveries to operational units were made in 1990. The program originally envisioned modifying 80 percent of the remaining 125 ASDF F-4EJs at a rate of about 20 per year. The program now includes some structural modifications. It also includes installation of the Japanese license-produced Westinghouse AN/APG-66J radar, Litton LN39 inertial navigation system (INS), Kaiser head-up display (HUD), and Hazeltine AN/APX-79A identification, friend or foe (IFF) system, as well as a Japanese-developed fire-control system and radar warning receiver (RWR). The F-4EJ Kai will be configured to permit use of the ASM-1 antiship missile.⁴⁶

The development and ultimate acquisition of the Mitsubishi/General Dynamics FSX support fighter is the central platform procurement program for long-range improvement of the ASDF anti-invasion capability. Full-scale development of the FSX, based on an extensive modification of the U.S. Air Force F-16C/D Block 40 Fighting Falcon, began in 1989 after considerable friction between the U.S. and Japan over issues involving technology transfers and work sharing.⁴⁷ The FSX was originally scheduled to replace the existing three squadrons of F-1s as they reached the end of their useful service lives between 1997 and 2001.

needs call for a minimum of 12 to 14 AWACSS and at least 20 tankers, whereas Japanese officials argue that Japan's needs are much smaller and that the U.S. Congress is really concerned with U.S. aerospace interests. See David E. Sanger, "Japan May Delay Buying U.S. Military Planes," *New York Times*, August 5, 1991.

⁴⁶See "Prospects of Next Defense Program (Part One, ASDF)," *Wing Newsletter* (Japan's Aerospace and Aviation Weekly), February 8, 1989; and "F-15s Take Place of Delayed FSX," *Flight International*, November 28–December 4, 1990.

⁴⁷Compared to the F-16 on which it is based, the FSX is planned to have a larger modified wing and tail, an extended aft fuselage, and a modified canopy and nose. The wing will be a single-piece co-cured graphite-epoxy composite structure based on a new design and manufacturing process developed by Mitsubishi. Japanese electronics firms are slated to develop the active phased-array radar, mission computer, inertial reference system, integrated EW suite, and fly-by-wire flight control system. See John D. Morrocco, "Revised FS-X Pact Eases Trade, Technology Concerns," *Aviation Week and Space Technology*, May 8, 1989.

Funding for expansion in numbers and upgrading of tactical reconnaissance platforms was also requested in the 1991–1995 plan. ASDF planners designated 17 F-4EJs to be upgraded and configured to carry a variety of external reconnaissance and ELINT pods. The existing inventory of RF-4Es is also slated for improvements, including installation of infrared (IR) reconnaissance and special radar equipment.⁴⁸

ASDF requirements also called for the continued procurement of SAMs, including the licensed-produced Raytheon MIM-104 Patriot SAM for area defense, and the development of a wide variety of new tactical missiles, such as the XAAM-3 air-to-air IR missile (an indigenous beyond-visual-range [BVR] radar missile) and the XASM-2 turbojet-powered antiship missile. Continued procurement of the Kawasaki T-4 trainer was also requested.⁴⁹

The plan actually approved in late 1990, combined with the delay of the FSX and other programs, indicates that the equipment improvements the ASDF will undergo in the 1990s will be far more modest than originally anticipated by the ASDF planners. The major disappointments for the ASDF were that the 1991–1995 plan authorizes only a reduced procurement of F-15s, no procurement of aerial tankers, and only a small buy of AWACS.

Authorization was given for the procurement of only 42 F-15Js over five years, compared to 63 authorized and 57 actually ordered under the previous plan.⁵⁰ Twenty of the 42 are slated to raise the authorized strength of five F-15J squadrons from 18 to 22;⁵¹ the remaining 22 will be formed into an eighth F-15J squadron scheduled to become operational in 1997.

⁴⁸"1991 Self Defense Forces Aircraft Procurement," *Air World*, April 1991, translated in JPRS-JST-91-032-L, June 27, 1991.

⁴⁹Paul Proctor and Eiichiro Sekigawa, "Budget Cuts to Slow Growth of Japan's Aerospace Industry," *Aviation Week and Space Technology*, February 11, 1991; "Budget Request for 6th Patriot System," *Jane's Defence Weekly*, October 27, 1990.

⁵⁰The most complete discussion of projected ASDF procurement for the 1991–1995 Mid-Term Plan is in "1991 Self Defense Forces Aircraft Procurement," *Air World*, April 1991, translated in JPRS-JST-91-032-L, June 27, 1991.

⁵¹The 203rd Squadron at Chitose Air Base increased to 22 aircraft during 1990, followed by the 204th at Hyakuri Air Base in 1991.

The justification for the eighth squadron derives from the delays in the FSX program. The ASDF originally planned to replace the oldest squadron of F-1s with FSXs in 1997, and then a second squadron in 1999. However, delays caused primarily by political and industrial problems between the U.S. and Japan have caused the program schedule to slip at least two years.⁵² To compensate for this delay, planners intend to shift one squadron of F-4EJ Kai Phantoms to the antiship role to replace one F-1 squadron, and to form an eighth F-15 squadron to take the F-4EJ squadron's place. That eighth squadron will at least partly be made up of aircraft that were to be used to increase the operational numbers of the already existing squadrons.⁵³ Thus, planners envision that by 1997, the ASDF force structure will comprise eight F-15J and two F-4EJ Kai squadrons dedicated to air defense, and two F-1 and one F-4EJ Kai squadrons committed to antiship operations.

The two other major disappointments for the ASDF were the outright rejection of the request for aerial tankers and the authorization for purchase of only four AWACSS. The official justification for rejecting the tankers (and an OTH-B radar system) focused on the claim that the means of implementing the 1,000-mile SLOC defense strategy had not yet been fully determined. However, it is likely that political concerns over domestic and regional reaction to tankers were decisive.⁵⁴

Shutdown of the Boeing AWACS production line in May 1991 raised serious new doubts about ultimate ASDF procurement because of the prohibitively high costs of reopening the production line. Boeing

⁵²The FSX program has also experienced considerable cost growth. Many U.S. industry and Air Force observers anticipate more delays and cost growth because of technical and developmental problems. See David Sanger, "New Rift In U.S.-Japan Jet Project," *New York Times*, November 20, 1990.

⁵³The total buy of F-15s after the 1991-1995 Mid-Term Plan will stand at just over 200, or about 25 aircraft per squadron. According to standard U.S. Air Force planning factors, this number is far too low to support eight squadrons with an authorized operational strength of 22 aircraft when attrition, maintenance, and training requirements are taken into account. The current total buy is more in line with standards for supporting 18 aircraft squadrons. However, ASDF attrition rates appear to be considerably below those of the U.S. Air Force, apparently in part because of much more conservative training and tactics and fewer flying hours.

⁵⁴"JDA's FY92 Procurement to Include AWACS, MLRS," *Nikkan Kogyo Shimbun*, September 26, 1990, translated in JPRS-JST-90-084-L, December 28, 1990.

has offered to develop an AWACS version of the B767-200ER to meet ASDF requirements, but the costs would be considerable. Lockheed and Grumman have also offered versions of the P-3 Orion, C-130 Hercules, and E-2C Hawkeye to satisfy the requirement. Although Japanese industry already builds part of the B767 and license-produces the P-3, thereby making those aircraft attractive for industrial reasons, the high costs involved make delay of AWACS procurement until the next mid-term plan a possibility.⁵⁵

The 1991–1995 plan did continue funding for the F-4EJ Kai program and the conversion of F-4s to tactical reconnaissance platforms. The only other large program was the authorization for 90 Kawasaki T-4 trainers to continue replacing the outdated T-33s at almost the same procurement rate as in the 1986–1990 plan. Other platform acquisitions include 3 Lockheed C-130Hs to supplement the existing 15 tactical transports in the First Transport Squadron, 2 CH-47Js to add to the 14 already operated by the ASDF, and modification of a couple of YS-11 transports into electronic countermeasures (ECM) aircraft (YS-11Es).⁵⁶ The plan funded all requested tactical missile development programs.

Approximately 60 percent of the JDA's Technical Research and Development Institute (TRDI) R&D budget will be devoted to FSX development, with initial operational capability (IOC) now slated for 1999. The plan also funds exploratory R&D studies on avionics, engines, and aerodynamics for a possible new-generation indigenous fighter to follow the FSX as a replacement for F-15s after 2000.

With respect to the ASDF force structure, the 1991–1995 Mid-Term Plan completes and fills out modernization programs under way for years, but at a slower pace than witnessed during the previous plan. No dramatic changes in force structure size, composition, or capabilities are envisioned. The only significant new platform, the E-3A AWACS, may not be procured at all. Thus, the ASDF force structure will retain the same characteristics it has exhibited for years based on its inventory of relatively modest numbers of highly capable plat-

⁵⁵Breck Henderson, "U.S. Offers Japan Proposals for Early Warning Aircraft," *Aviation Week and Space Technology*, February 10, 1992.

⁵⁶"Japan Approves Five Year Defense Spending Plan," *Aviation Week and Space Technology*, January 7, 1991.

forms with an overwhelmingly defensive emphasis. Without tankers and additional fighters and AWACSSs, the ASDF will be hard-pressed even to meet the operational requirements established in the early 1980s. Until the FSX comes on line at the turn of the century, the ASDF's minimal offensive capabilities will actually decline as F-1s reach the end of their useful service lives late in the decade.

The likelihood of dramatic change and significant improvement in the ASDF's existing capabilities may be much greater in the area of operations than in the area of equipment.⁵⁷ The ASDF has always exhibited strengths in these areas, including competent pilots and other personnel, high maintenance standards, and high equipment mission-readiness rates. Historically, however, the ASDF has suffered what many outside observers consider severe deficiencies in its war-fighting skills and support assets. Its C3 shortcomings derive from the lack of a centralized, real-time command capability, as well as from very poor coordination with the MSDF and GSDF. Operational proficiency is undermined by conservative operational concepts, antiquated tactics, and unrealistic, stylized training. Like its sister services, the ASDF suffers from inadequate war reserves and poor survivability of the basing and support infrastructure. Since the late 1980s, however, the ASDF has begun to make significant improvements in many of these areas.

Air defense (DCA) is, of course, the primary mission of the ASDF tactical fighters. However, the ASDF lacks a truly centralized wartime command authority. Moreover, ASDF operational concepts are often likened to those of the former Soviet Air Force or to those of the U.S. Air Force during the 1950s and early 1960s that proved so inadequate in the early phases of the Vietnam War. ASDF fighters typically operate interception missions under rigid positive ground control. Pilot tactics are usually characterized as conservative, unaggressive, and uncreative, and the outdated "welded-wing" tactics are often employed. Moreover, ASDF pilots take part in very little realistic air combat training and dissimilar air combat training (ACT/DACT), and few of them have the opportunity to practice live missile firings.

⁵⁷This assessment of ASDF operational proficiency is based on interviews with knowledgeable U.S. Air Force personnel.

In the past, the ASDF paid little attention to doctrine, training, and operational concepts for ground support or offensive operations. Probably the biggest problem area is the historically poor coordination and communication among the services. Combined training and command post exercises are rare. For example, until recently at least, there were no joint tactical communications procedures and no detailed CAS procedures. In addition, virtually no mission packaging was planned or practiced until very recently, and restrictions on low-level flying and a lack of bombing ranges prevent realistic practice. The ASDF never participated in the Cope Thunder exercises in the Philippines, the Pacific version of Red Flag training open to U.S. allies.

Over the last several years, however, there have been indications of significant improvement, stemming in part from expanded joint training activities with the U.S. Air Force. U.S. Air Force officers report a new ASDF activism and responsiveness to U.S. Air Force suggestions. For example, ASDF fighters recently began participating in large force employment training in major field exercises, and ASDF pilots have become increasingly involved in ACT/DACT with U.S. Air Force and Navy pilots. During combined exercises, the ASDF planners have cooperated in the development of defensive air tasking orders (DATOs) that are integrated into a centralized C3 approach. The ASDF has even taken the first tentative steps toward more realistic offensive operational training by exercising combined attack packages against simulated maritime targets. There have also been indications of ASDF acceptance of integrated offensive air tasking orders. In spite of the enormous progress that is being made, however, the consensus is that much work still remains to be done.

Like many other air forces, the ASDF has its operational capabilities undermined by problems with sustainability and survivability. For example, the ASDF lacks sufficient hardened aircraft shelters (HASs) and needs more main operating bases (MOBs) and wartime dispersal bases to increase survivability. ASDF munitions and spare-parts stocks are low by NATO standards. The 1991–1995 plan is intended to address some of these problems.

In short, the ASDF shares many traits with its sister services. The SDF as a whole are clearly becoming increasingly capable and have made great strides over the 1980s. But they remain uniquely defen-

sive in orientation, relatively unbalanced in force structure, and chronically deficient in several operational and support areas. The equipment modernization programs authorized in the 1991-1995 Mid-Term Plan will not dramatically alter this assessment. Given the collapse of the Soviet Union and growing downward political pressure on the Japanese defense procurement budget, it is seriously doubtful that even the modest equipment goals in the new plan will be realized. Furthermore, significant alterations in the historic SDF threat perceptions, which provided the rationale for the increased defense buildup of the 1970s and 1980s, are inevitable if current trends in the former Soviet Union continue. The question is, what will the SDF look like by the end of the 1990s? We return to this question after examining Japanese defense resource trends and defense industry capabilities.

RESOURCE TRENDS AND DEFENSE INDUSTRY CAPABILITIES

Future Japanese security directions will be affected not only by political trends and military capabilities, but by available resources and the strengths and weaknesses of Japan's defense industries. This chapter analyzes these factors, with a view to assessing the ability of Japanese defense industries to support a major military buildup over the coming decade. A common assumption, of course, is that Japan's defense industry can equal Japan's civilian industry in its production of goods—i.e., that Japan will start to produce missiles and fighter aircraft just as it did cars and VCRs. Extrapolations of the growth in Japanese defense resources over the past 15 years into the future reinforce this assumption. A close examination, however, suggests a somewhat different story.¹

DEFENSE RESOURCES: TRENDS AND PROJECTIONS

As mentioned in Chapter 2, Japanese defense expenditures have shown extraordinary growth since the mid 1970s. Japan's total defense budget grew at a compound annual rate of 7.5 percent between 1976 and 1990. As indicated in Tables 3 and 4, procurement (defined here as the combination of R&D and equipment acquisition) grew

¹For a more comprehensive treatment of the issues in this chapter, see Arthur Alexander, *Of Tanks and Toyotas: An Assessment of Japan's Defense Industry*, N-3542-AF (RAND, forthcoming).

Table 3
Defense Expenditure Trends

FY	Original Budgets (billion ¥)				Defense as Percentage of GNP	R&D and Acquisition as Percentage of Defense	Personnel as Percentage of Defense
	Defense	R&D	Acquisition	R&D and Acquisition			
1975	1,327	11.9	252.0	263.9	.84	19.9	52.9
1976	1,512	13.6	248.5	262.1	.90	17.3	56.0
1977	1,691	15.2	293.9	309.1	.88	18.3	55.0
1978	1,901	17.1	325.8	342.9	.90	18.0	54.4
1979	2,095	21.0	392.5	413.5	.90	19.7	51.4
1980	2,230	22.3	460.9	483.2	.90	21.7	49.3
1981	2,400	24.0	539.9	563.9	.91	23.5	47.7
1982	2,586	28.4	580.3	608.7	.93	23.5	46.6
1983	2,754	30.3	684.4	714.7	.98	26.0	44.5
1984	2,935	35.2	772.5	807.7	.99	27.5	44.6
1985	3,137	50.2	822.1	872.3	1.00	27.8	45.1
1986	3,344	56.8	899.7	956.5	.99	28.6	45.1
1987	3,517	66.8	965.7	1,032.5	1.00	29.4	43.9
1988	3,700	74.0	1,038.9	1,112.9	1.01	30.1	42.7
1989	3,920	82.3	1,097.6	1,179.9	1.01	30.1	41.2
1990	4,159	92.9	1,140.3	1,233.2	1.00	29.6	40.1
1991	4,386	102.9	1,216.2	1,319.1	1.00	30.0	40.1

SOURCE: Defense Agency, *Defense of Japan*, various years.

Table 4
Defense and GNP Expenditures and Growth Rates

Category	1990 Value of Japanese Expenditures (billion \$) ^a	Comparable U.S. Figures (billion \$)	Growth Rate of Japanese Expenditures, 1976-1990 (%/year)	Comparable U.S. Rates (%/year) ^b
Defense	20.8	303.3	7.5	3.5
R&D	0.5	36.5	14.7	5.2
Acquisition	5.7	81.4	11.5	6.8
R&D and Acquisition	6.2	117.9	11.7	6.2
GNP	2086.0	5500.0	6.7	2.6

^aDollar values arrived at using purchasing-power parity (200 ¥ = \$1).

^bRates adjusted for inflation.

even faster, at 11.7 percent, increasing by 4.7 times over the 15-year period.² Because of the very low level from which this growth began, however, the value of procurement was only about \$6.2 billion in 1990, or one-twentieth of the comparable U.S. expenditures.³ Also, the decline of Japanese price levels over part of this period caused the real value of Japanese defense R&D and equipment purchases to grow even faster than the nominal amounts, at an average rate of 12.4 percent since 1976.⁴

By the end of the 1980s, Japan's defense expenditures in purchasing-power parity terms were roughly the same as those of Italy, about half those of France, West Germany, and the United Kingdom, and twice those of Israel. But because of the rapid growth rate during the

²Weapons development and R&D expenditures are sometimes buried in the "equipment acquisition" account. Combining the two sectors provides a more accurate portrayal of events than is provided by either the acquisition or R&D figures separately. The reasons are discussed in more detail below.

³Because of significant departures in recent years from the relative values implied by currency exchange rates, the Japanese expenditure figures are converted to dollars using purchasing-power parities. For 1989, the Organization for Economic Cooperation and Development (OECD) estimate of purchasing-power parity value was ¥202 versus an exchange rate of ¥146 per dollar. See OECD, *Main Economic Indicators*, March 1990, p. 173.

⁴The price index for "Machinery and Equipment" was used to adjust nominal values of R&D and acquisition to real terms. Since this price index fell slowly by a little less than 1 percent per year, the nominal values are fairly close to price-adjusted values.

years after 1976, Japan's *average* defense expenditures over these years were much smaller than, say, Italy's and closer to Israel's. The question is whether the astounding growth rates of the Japanese defense budget, and especially of the resources devoted to new weapons, will continue.

The past growth in procurement (R&D and acquisition) was arrived at by compounding three separate factors: the growth of the economy (as represented by the GNP), the growth in the defense budget's share of the GNP, and the growth of procurement's share of the defense budget. All three of these growth factors are likely to remain stable or even decline in the next decade.

GNP Growth

Japan's real GNP grew at a 4.7 percent annual rate in the 1970s and at a 3.9 percent rate in the 1980s. Since economic growth depends on the growth of labor and capital inputs and on their productivity, estimates of these factors will reveal much of the story. Estimates for the coming decade, based on demographic projections of labor force growth and economic modeling of investment and productivity gains, suggest a somewhat lower rate of about 3.5 percent.⁵

As mentioned in Chapter 2, Japan's labor force growth is slowing. Indeed, at current rates, it is likely to become negative over the next decade as the number of people entering the labor market drops to its lowest since the 1930s. Productivity growth has declined slowly but steadily since the 1970s. An important reason for this decline is the end of the productivity "catch-up" phenomenon of the postwar period, wherein Japan's total factor productivity growth was related to its lag behind the world's technological leaders. As this gap closed, Japanese productivity growth gains from "catching up" came to an end.⁶

⁵Charles Wolf, Jr., et al., *Long-Term Economic and Military Trends, 1950-2010*, N-2757-USDP (RAND, April 1989), p. 8.

⁶Steve Dowrick and Duc Tho Nguyen, "OECD Comparative Economic Growth 1950-1985: Catch-Up and Convergence," *American Economic Review*, December 1989, pp. 1026-1027.

Defense Budget Share of GNP

The defense budget's share of the GNP has grown slowly but steadily since the mid 1970s, from a level of 0.84 percent in 1975, to 0.90 percent in 1976, and to a breaking of the 1.0 percent political barrier in 1987.⁷ As noted in Chapter 2, this growth had several forces behind it, including the extraordinary increase of Soviet military activities in the Pacific region and the extension of Japan's defense responsibilities under U.S. prodding. Changing conditions will dampen the prospects for future budgetary growth.

Procurement Share of Defense

The rise of the R&D and acquisition share of the defense budget to its current 30 percent from the 1976 level of 17.3 percent was made possible by a rapidly growing overall budget and a relative neglect of manpower. While procurement was experiencing its extraordinary growth from 1976 to 1990, the total number of active-duty SDF personnel increased by only 9,000 people, or 3.9 percent. This pattern repeats a fairly common occurrence across many countries: when total budgets increase and the force posture remains constant, procurement budgets skyrocket; and when budgets fall, procurement suffers disproportionately as military establishments attempt to protect their people and their organizations.

In addition to this budgetary effect, the number of young men available for Japanese military service is falling and the economy's demand for manpower continues to rise. Indeed, as noted in Chapter 2, manpower supply will be a constraint on general economic growth in the next decade. To attract enough men to fill the existing force structure, the military will have to increase its rate of pay for the entire uniformed force, which will require some reallocation of the budget to manpower. JDA plans had called for holding force levels steady in the next five-year period, although JDA officials acknowledge that even in the past the annual recruiting pace of recent years

⁷Because of the great political sensitivity of the 1 percent defense-to-GNP ratio, several analysts assert that some defense-related allocations are hidden in other budget categories. The size of such hidden expenditures has not been estimated.

could not be maintained.⁸ Moreover, the supply of officers is just as problematic: candidates applying for officer school are of lower quality, and the proportion of graduates actually going on to serve in the forces is falling.⁹

Accompanying these personnel pressures are rising demands that R&D expenditures be increased from the very low levels budgeted in the past. The overt R&D budget goes mainly to support the JDA's TRDI, which is the main contracting agency for defense R&D in industry, as well as a performer in its own facilities. Until the mid 1980s, the R&D budget amounted to only 1 percent of total defense expenditures. In 1985, however, the government decided to increase the amount to 2.5 percent, which was achieved in the 1990 budget. Current plans call for ultimately raising the figure to 5 percent of defense spending, roughly equivalent to that of Germany. Even though the nominal value of budgeted R&D has grown extremely rapidly (15 percent per year since 1976), its absolute value is tiny: only ¥104 billion (\$0.5 billion) in 1990.

Other factors are also dictating an increase in the priority given to R&D, ranging from a JDA desire to gain greater latitude vis-a-vis its defense contractors to a broader government desire to increase Japan's leverage in technology transfer negotiations with the U.S. For present purposes, the point is simple: as the R&D share of the defense budget grows, the share going to acquisition will be pinched. It is therefore unlikely that the combined R&D and acquisition share will advance much beyond the 1990 figure of around 30 percent, given the other demands on the total budget, especially for personnel needs. Indeed, the budget share for equipment acquisition could very well fall in the future. In the FY 1992 plans, new contracts for "frontline equipment" actually fell from the previous year's level.

Future procurement possibilities are plotted in Figure 12, which indicates high, medium, and low possibilities for equipment acquisition. The high estimate assumes a real economic growth rate of 5

⁸"Defense Forces to Be Frozen at 1990 Level," *Japan Economic Journal*, September 2, 1989, p. 13.

⁹"Can Japan Defend Itself?" *Business Tokyo*, February 1988, p. 55.

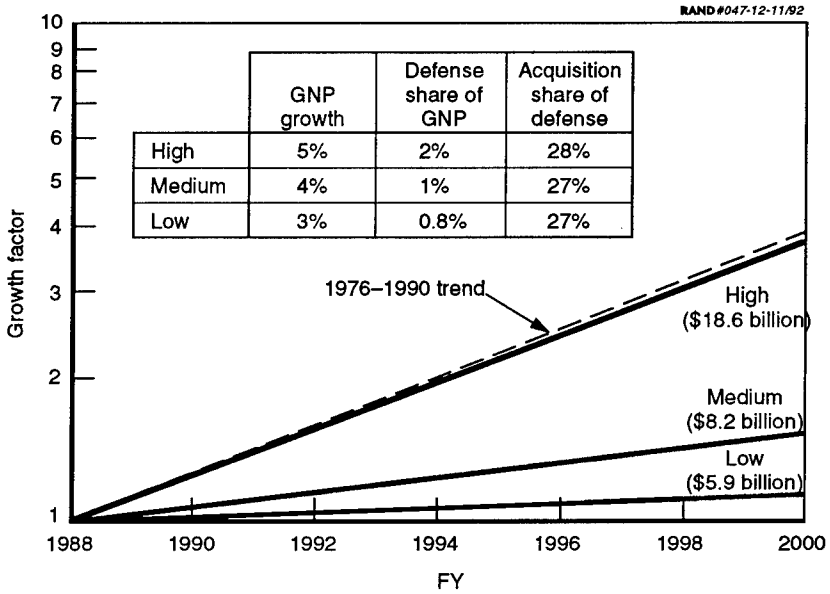


Figure 12—Projections of Future Defense Acquisition

percent and a doubling of the defense share of the GNP to 2 percent. With such strong increases in defense spending, acquisition would be able to maintain its current share of the defense budget despite being squeezed by manpower. The medium scenario projects a 4.0 percent real economic growth rate and no change in the current 1 percent defense share of the GNP. The proportion of the defense budget going to acquisition would be likely to fall somewhat. The slow-growth, or low, projection assumes a weaker economy and a falling share of the GNP for defense, perhaps for domestic political reasons or because of relaxed international tensions.

Note that even under the most growth-oriented alternative, the pace of acquisition would barely duplicate that of the previous (1976-1990) period. The slow-growth scenario would result in a level of expenditures only \$200 million higher than the 1990 figure. While the medium scenario would witness a 4.5 percent annual increase, acquisition would still not even reach the level of current defense acquisition in France and Germany.

In the arena of future international comparisons, the range of outcomes broadens. For example, if Japanese defense growth were to take on the high-scenario values and U.S. budgets were to fall to half their 1990 levels, Japanese expenditures on R&D and acquisition would rise from about one-twentieth of the U.S. figure in 1990 to more than one-third by 2000, and Japan's spending on both total defense and R&D and acquisition would be twice Germany's and France's.¹⁰ According to the low scenario, however, Japan's defense spending levels in 2000 would still be at roughly 75 percent of those of both Germany and France, and would be at only 15 percent of those of the U.S.—even if the U.S. were to impose 50 percent cutbacks.

There is one point that should be emphasized in assessing these possible outcomes: domestic and international politics would have to undergo extraordinary asymmetrical transformations for Japanese policies to become wildly out of step with those of the Western nations. Therefore, it is unlikely that very rapid expansion in Japan would be coupled with radical declines in the U.S. Although Japanese defense expenditures could very well grow modestly relative to those of the U.S. and the major European NATO nations, the overall shift in comparative military power is likely to be rather limited.

Under the most likely assumptions, therefore, the extraordinarily rapid growth of Japanese defense procurement is over. This past growth was the result of circumstances that will probably not repeat themselves in the 1990s, and the distinct possibility is of a leveling out of procurement spending. Any analysis of the future of Japan's defense industry must begin with these estimates of future Japanese government procurements.

¹⁰French defense budget plans are described in "Accord Proposes Flat French Defense Spending, Then Cuts," *Defense News*, August 19, 1991. For Germany's plans, see "German Cuts Hit Army the Hardest," *Defense News*, January 20, 1992.

DIFFERENCES BETWEEN JAPANESE CIVILIAN AND DEFENSE INDUSTRIES

The "Japanese miracle," i.e., the stunning growth of output and productivity in much of Japan's civilian industry, was stimulated by a number of environmental conditions and policies that have been missing from the defense production sphere.¹¹ Japan's defense industry thus has not developed the levels of productivity, competence, and design effectiveness witnessed in civilian production. Indeed, the present strengths of Japan's defense industry flow mainly from the achievements on the civil side, including world-class technology and an economy large enough to make sizable investments in defense.

Japan's defense industry shared few of the preconditions responsible for the spectacular growth of civilian production. Output was constrained by the small procurement needs dictated by the Japanese military's force posture and budgets and by government policy forbidding the export of military-related items. As a result, competition could not pay off through additional domestic or foreign sales. Moreover, competition was carefully controlled and managed by the Ministry of International Trade and Industry (MITI) and the JDA.

Whereas such guidance was often of dubious effect in the civilian industry, it generally worked in the defense sphere. The Arms Manufacturing Law of 1954 gives MITI the authority to control participation in the defense industry. Attempts to diversify from one line of defense products to another are usually rebuffed by MITI as it attempts to reduce what it considers to be the harmful effects of competition in a restricted market: the competing away of profits, which would endanger the ultimate financial health and stability of producers. The result is a system in which the JDA distributes contracts and has almost total discretion in designating contractors under long-term awards. Tacit agreements ensure that a firm's long-run interests will be served if it cooperates with JDA wishes—for example, by initiating R&D on new systems prior to formal government

¹¹These developments are described more fully in Arthur J. Alexander, *Comparative Innovation in Japan and in the United States*, R-3924-CUSJR (RAND, 1990), Sec. II.

appropriations.¹² Battles between businesses to win contracts are said to be almost unheard of,¹³ and major firms often cooperate with each other as contractors and subcontractors in an informal "defense family."

Despite the close-knit relationships between the government and the defense industry, and the informal ties among many of the industry's firms, many observers question the ultimate profitability of defense business.¹⁴ As a result of low profits, for example, MHI's defense divisions are beginning to diversify into nongovernment areas. Other evidence on defense industry profitability appears inconsistent with such gloomy assessments, however. In 1986 through 1988, for example, aerospace and defense stocks outperformed the Nikkei Stock Index by more than 40 percent.¹⁵ A survey by the Society of Japanese Aerospace Companies in the mid 1980s revealed that "operating profits of eight defense contractors' aircraft divisions were 5-8 percent higher than the companies' overall average margins."¹⁶

These seemingly inconsistent assessments may be reconciled by noting the very rapid growth of Japanese defense procurement in the 1980s, which resulted in the absolute value of these purchases reaching sizable levels by the end of the decade. Projection of these trends into the next decade led many people to an optimistic view. Indeed, many companies may have actually enjoyed healthy profits during this period, especially if they were involved in large and growing programs.

As noted earlier, though, the growth of the past is likely to turn into a slowdown. *Keidanren*, the leading Japanese business confederation, noted in 1990 that the momentum in the arms industry was already waning. It expected consolidation rather than expansion in the

¹²The MITI, JDA, and defense industry representatives we interviewed all noted the existence of such tacit agreements.

¹³"In Self-Defense," *Business Tokyo*, February 1988, p. 52.

¹⁴In our interviews with them, defense product officials at Mitsubishi Heavy Industry (MHI) described after-tax profit rates in 1990 of 2 percent of sales.

¹⁵"A Yen for Arms," *Far Eastern Economic Review*, February 22, 1990, p. 58.

¹⁶*Ibid.*

1990s, with the level of new contracts declining in the next mid-term plan.¹⁷

DEFENSE INDUSTRIAL POLICY

The Japanese government has actively promoted an indigenous weapons industry despite the comparatively low level of procurement and the small number of items typically purchased. The vigor of its promotion has varied, however, as it has attempted to balance the competing arguments and forces for and against defense industrial independence. Industry itself has been the chief proponent of domestic production and development (*kokusanka*), acting mainly through the Defense Production Committee of the powerful *Keidanren*.¹⁸ The desires and influence of the JDA and the uniformed services have varied according to circumstances. These groups prefer a competent indigenous industry to advance national autarky, although they often object to the high costs and lower performance levels of native designs. And they desire commonality and interoperability with U.S. equipment but dislike the extended logistics pipelines required for U.S.-produced components and "black boxes" that the U.S. does not allow to be license-produced or maintained in Japan.

The Ministry of Finance prefers the lower costs of off-the-shelf foreign equipment but has been convinced to go along with the policy of domestic sourcing for the presumed national benefits. The Ministry of Foreign Affairs has tended to favor procurement from the U.S. to help with balance-of-payments problems and to remain consistent with broader Japanese-American ties and interests. MITI has tended to back the interests of Japanese firms but has independently promoted a vigorous aerospace industry and the diffusion of high technology throughout the Japanese economy.

Supervision and promotion of industry clients has been a hallmark of MITI's operation in the postwar period. MITI's responsibility for

¹⁷Ibid.

¹⁸For an excellent description of the history of *kokusanka*, see Michael Green, "Despite Aegis, Japan Will Still Depend on the U.S. Navy," *Defense News*, August 13, 1990.

much of the defense industry (not all—shipbuilding is supervised by the Ministry of Transportation) has induced powerful bureaucratic-political support for continued subsidization and promotion of this sector. This influence has not been one-sided. The largest defense contractors are divisions of some of the largest companies in the country. As heavy financial contributors to the ruling party, these companies have considerable political sway where procurement policy is concerned.

The official figures published by the JDA purport to show that domestic procurement makes up more than 90 percent of the total. The actual figures, however, are considerably lower.¹⁹ Japanese contractors estimate that U.S. suppliers produce up to 40 percent of the total value of Japanese defense procurement.²⁰ The artificially high official figures play a domestic political role in the continuing debate over indigenous arms production as the government attempts to demonstrate that its policy of independence is having a measurable effect.

Another powerful motivation behind the establishment and support of Japan's arms industries was the belief that weapons R&D and production would stimulate general technical competence, production efficiency, industrial know-how, and economic growth. Although this belief has now lost much of its past power, it was widely asserted that defense programs would enable nondefense companies to benefit from defense spin-offs or the development of so-called dual-use technologies that would be unprofitable investments if companies were confined to purely civilian markets. Moreover, the attraction of defense as a source of commercial technology is now considerably less in Japan than in the U.S., since Japan's spending on defense R&D, by any measure, is only a few percent of what the Americans spend. In fact, most observers, including the JDA, now claim that it is the civilian technological base that makes Japanese defense technology interesting. An executive from Nippon Electric Company's (NEC's) defense division noted that "in Japan, it is the civilian tech-

¹⁹Defense Agency, *Defense of Japan, 1990*, translated by The Japan Times, Ltd., p. 318. The published figures count all items assembled in Japan as 100 percent domestically produced, even if a considerable fraction of the components are imported.

²⁰Steven K. Vogel, *Japanese High Technology, Politics, and Power*, Berkeley Roundtable on the International Economy, Research Paper No. 2, 1989, p. 47.

nologies that are being turned to military applications, and the utilization of defense technologies for non-military products is almost non-existent."²¹ The JDA acknowledges that

dual-purpose high technology in particular has been intensively applied in the development and production of defense equipment today. . . . Therefore, the Defense Agency will positively utilize the private sector's technology. . . . Particularly in the area of basic research, the Defense Agency is heavily relying on the private sector while carrying out research to enable these private sector technologies to apply to future advanced defense equipment.²²

Even though the expectation of spin-offs has declined as a motivation for defense spending, a new concept seems to be driving private and government behavior: the notion that much technology is fungible—i.e., that it is undifferentiated and flows easily from one sector to another. This idea is asserted particularly for electronics and materials. To the extent that a central objective of the Japanese defense industry is to produce profitable technology with government support, judgments about policy "success" must consider both the effectiveness of weapons and the general usefulness of the technology. An additional argument for autarky involves the asserted uniqueness of Japanese operational requirements—e.g., the small-statured infantryman cannot accept large Western rifles; Japanese roads and tunnels cannot accept large Western tanks.

In summary, the arguments for an industrial policy favoring an indigenous arms industry include political and strategic independence, technology dualism and spillovers, operational uniqueness, and logistics costs and the certainty of supply. The chief case against such a policy is its cost: a well-justified Japanese rule of thumb claims that domestic production is three times the cost of an import. A second argument sees a loss of interoperability with American systems if Japan fields its own designs. And a third argument sees the procurement of Japanese systems substituting for the import of American products and thus exacerbating economic tensions with the U.S. This last argument has tended to be the most powerful

²¹"In Self-Defense," *Business Tokyo*, February 1988, p. 53.

²²Defense Agency, *Defense of Japan, 1989*, translated by The Japan Times, Ltd., p. 142.

within the Japanese government and the source of the most frustration to Japanese industry. However, tightening defense budgets will push the cost issue forward in the next several years, and the cost-minimizing objectives of the Ministry of Finance could well dominate the 40-year debate over defense production independence.

Aviation has been the chief beneficiary of Japan's defense industry policy. MITI's view of defense as a stepping-stone to a technologically advanced economy pictures aviation as an intermediate stage. In the early 1950s, MITI lobbied vigorously, but not wholly successfully, to develop a government consensus on its policy and its supervision of an arms and aircraft industry. MITI established an Aircraft Division in 1952 (which later became the Aircraft and Ordnance Division) and partially promoted its goals through the Aircraft Manufacturing Enterprise Law. In 1954, MITI began actively promoting the development of aviation, later adding missiles and electronics. While this endeavor has produced some important successes, government policy on the whole has been ineffective in accomplishing MITI's goals, particularly in the case of aviation.

For over 35 years, the Japanese government has identified aviation (now changed to "aerospace") as a key technology, equal only to a very few other so-designated sectors (nuclear power and the information industry). And during this time, the government has periodically subsidized the development of civilian and military aviation technology through the Aircraft Manufacturing Enterprise Law and its implementing budgets. A central purpose of the 1954 aircraft industry promotion law was to cartelize the industry.²³ Government supervision has produced a stable 30-year division of labor, carefully orchestrated work sharing, coordinated investment strategies, managed competition, and extensive state support.²⁴ What this arrangement has not produced is an internationally competitive aviation industry.

The attempts to develop and profitably market commercial aircraft have met with a uniform lack of success. The only major civilian air-

²³Richard Samuels and Benjamin Whipple, "Defense Production and Industrial Development: The Case of Japanese Aircraft," in Chalmers Johnson et al. (eds.), *Politics and Productivity* (Ballinger, 1989).

²⁴*Ibid.*

craft produced so far in Japan, the YS-11, was a 1960s attempt to enter the market. Production was halted in 1973, and more than \$100 million in government loans was written off. Following the YS-11 embarrassment, MITI decided to leave production and sales to the private sector but continued to subsidize the research and commercial development of aircraft components for several Boeing aircraft and their engines (more than \$100 million in the 1970s and \$21 million in 1989).²⁵

More than 80 percent of the Japanese aviation industry's sales have been to the military. Like many of their counterparts elsewhere, the Japanese military has not been as concerned as commercial customers about costs and has accepted the inefficiency of domestic producers. Since the 1950s, Japanese industry has produced a series of military aircraft licensed from U.S. companies. At first, these efforts were subsidized by the U.S. under military assistance programs whose goal was to reconstruct a capable Japanese aircraft industry. The Japanese government initiated a series of domestic designs beginning in 1955, including those for subsonic and supersonic trainers, a transport, and a fighter-support derivative of the supersonic trainer. Even the military, however, found that it could not always absorb the high costs of domestic production. Production of the C-1 jet transport, for example, was halted in 1981 because of high costs.²⁶

The government has continued to support a program of aircraft technology development and domestic design. Current projects include an intermediate-class trainer, a ship-based antisubmarine helicopter, and the FSX fighter-support aircraft. Although a wholly indigenous design was seriously considered as a possible choice for the FSX, the Japanese government finally settled on a co-development derivative of the U.S. General Dynamics F-16. This decision came after the U.S. government had urged Japanese decisionmakers to consider their choice in the full realm of U.S.-Japan relations, including trade, international security, and foreign affairs.

²⁵*Japan Aviation Directory, 1989-1990* (WING Aviation Press), p. 18.

²⁶Reinhard Drifte, *Arms Production in Japan: The Military Applications of Civilian Technology* (Westview Press, 1986), p. 55.

American evaluations of the wholly indigenous plans for the FSX were not optimistic. The design was not thought to be militarily effective, and the cost would have been extraordinarily high. U.S. analyses of the several alternatives estimated a total cost of \$3 billion to buy F-16s off-the-shelf and \$12 billion for Japan to design and produce a domestic model. The U.S. technical experts who reviewed the plans for the domestic design felt that the detailed technical requirements bore little connection to the specified tactical missions. They appeared to have been simply "cobbled together" from the various research projects on which the defense laboratories and industry had been working.²⁷

The FSX's early history illustrates several points that are central to the issues raised here. One point in particular deserves mention: a confusion about technology and systems.

Early Japanese discussions about the feasibility of a wholly indigenous development of the FSX hinged on the inventory of technologies in the possession of Japanese companies and the research work done by the TRDI. A missing element of these discussions and analyses was the notion of designing a *militarily capable system*, bringing to bear the knowledge and experience from operations and use that combine and transform a collection of technologies into a war-fighting machine. Broadly described as the "requirements process," the conceptual development of effective military products requires the astute blending of technical acumen and military judgment. Although the American approach to requirements is often rightly accused of exhibiting serious deficiencies, the U.S. has nevertheless been able to capably and professionally generate first-class weapon systems through persistence, the accumulation of rich experience, feedback from training and wartime operations (domestic and foreign), the occasional application of genius, and the commitment of required resources. Neither the Japanese military nor Japanese industry could bring such attributes to bear on the FSX. And they did not have the more commonly discussed systems integration experience, which they hoped to gain through a joint program with an experienced U.S. producer. Despite these deficiencies, the Japanese

²⁷These observations are from our interviews with former U.S. Defense Department officials.

were highly confident about their ability to transform technology, much of it civilian, into an advanced attack aircraft. According to interviews with American FSX program participants, their Japanese partners proved better at detailed technology and engineering than expected, and worse than expected at systems integration.

Primarily because of the tough mission requirements, the FSX program has witnessed a doubling or more of its projected costs. FSX cost growth has had repercussions throughout Japan's defense R&D and procurement organizations. Acceptance of the higher costs has required reallocation of the fixed total budget among competing projects. However, because of the political and media spotlight on the FSX and because of the aircraft's central role in the ASDF force posture, the Japanese government could neither cancel the program nor hold its budget to the original level. Instead, it went along with the typically American solution of attempting to meet the original requirement. This decision had consequences for the timing and funding of virtually every other development program for all the military services. Despite the sharply higher growth in R&D budgets planned for 1991 to 1996, the FSX alone will absorb more than two years of total R&D funds, and even the new estimates may be too low.²⁸ To accommodate the higher FSX spending, other projects were delayed, new projects were postponed or cancelled, and an already tight R&D budget was made tighter.

In addition to aviation, tactical missiles and space have been singled out for government support as strategically important technologies. Japanese government priorities for the 1990s continue to be on missile development and production but are based on somewhat different rationales than in the past. The first reason relates to technology: civilian industry is now considered to be preeminent in many of the technologies central to modern missile design—electronics and sensors. Second, missile development can more easily be squeezed into the JDA's R&D budget than can the development of larger platforms whose effectiveness requires a host of subsystems. Because they are "stand-alone" weapons, many missiles can be produced as end items without the cost and complications of the more complex systems.

²⁸Caleb Baker, "FSX Problems Imperil U.S.-Japan Arms Deals," *Defense News*, December 3, 1990, p. 4.

Ironically, even though MITI has been able to guide this targeted industry with little objection from domestic or international sources, it has been ineffective in achieving its goals. Though competently developed and produced, its aircraft, missiles, and armored vehicles lag comparable foreign systems by up to a decade in performance. In addition, costs are high and spin-offs to civilian industry are few. MITI's 40-year program of nurturing the aviation industry has had but limited success: only about 20 percent of industry production is for the civilian market, much of that is supported by government loans, and profits in the civilian aviation sector remain elusive.²⁹

Japanese defense producers have operated in a carefully coordinated environment in which cost-effectiveness and operational performance have not been the governing measures of success. Military cost-effectiveness has taken second place to industrial planning and (perhaps) commercial priorities. At issue today is the future of this policy. The costs of development continue to grow, unit production costs are skyrocketing, the technology of weapons is becoming more arcane, and military requirements are multiplying in complexity. Japan's defense industrial policy will depend on the course of the military budget, the degree of general fiscal constraint, and the available alternatives. U.S. policy will play a role in the evaluation of alternatives, especially U.S. restrictions on technology exports to Japan and the general trend of U.S.-Japan relations. In any event, strong forces will constrain Japan's defense technology policy in the coming decade.

TECHNOLOGY AND DESIGN

Japan's defense budgets are not only considerably smaller than those of many of the European NATO members, they are differently composed, with a smaller share going to R&D and acquisition. The U.S., for example, devotes almost 40 percent of its defense budget to R&D and acquisition, compared to Japan's 30 percent (which grew from a

²⁹If it is true that military and commercial technologies can be scooped out of the same barrel, and if the focus of policy is on developing commercial advantage, then the pursuit of defense industrial independence may have had greater success than is readily apparent. However, a statement of the argument does not constitute a demonstration of its validity; independent evidence is necessary to test it.

share of only 17 percent in 1976). American military R&D, moreover, is as much as 40 to 45 percent of acquisition, compared with Japan's 5 to 7 percent.

Except in the case of a few weapons types—mainly aircraft, tactical missiles, armored vehicles, and ships—Japanese producers have little experience with military products. Even for the systems they have worked on most, their experience is more focused on the platform (the hull, airframe, and vehicle) than on the other components.

To determine the effects of this absence of broad defense industrial experience on specific weapons, we examined the sources of the subsystems on two major systems: fighter aircraft and destroyers (DD-class ships). In doing so, we focused on the sources of the airframe, engine, radar, and main armaments for the aircraft, and on the sources of the hull, engine, major radars and sonars, helicopters, missiles, guns, and torpedoes for the destroyers.

The subsystems were categorized according to their main source of origin: (1) purchased from a foreign source, (2) produced in Japan under a license from a foreign source, and (3) developed and produced domestically in Japan. Actual experience, of course, did not always fall neatly into these three categories. For example, whereas the first production lot of airframes of the F-104J aircraft produced in Japan contained only 43 percent of indigenously supplied parts and components, the last lot was 64 percent local content. Despite the volume of foreign supplied parts, the F-104J airframe was defined as being license-produced in Japan.

As Figure 13 illustrates, the gain in experience over the past 30 years has been substantial but not uniform. The only Japanese-produced subsystem of the first postwar Japanese fighter, the F-86F, was the licensed airframe; the engine and armaments were purchased from American suppliers.³⁰ Since the F-86, however, licensed produc-

³⁰The F-86F assembled by MHI had no radar. The ASDF, however, did receive 106 F-86D aircraft from the U.S. manufacturer (North American Aviation) that were equipped with the Hughes AN/APG-37 radar.

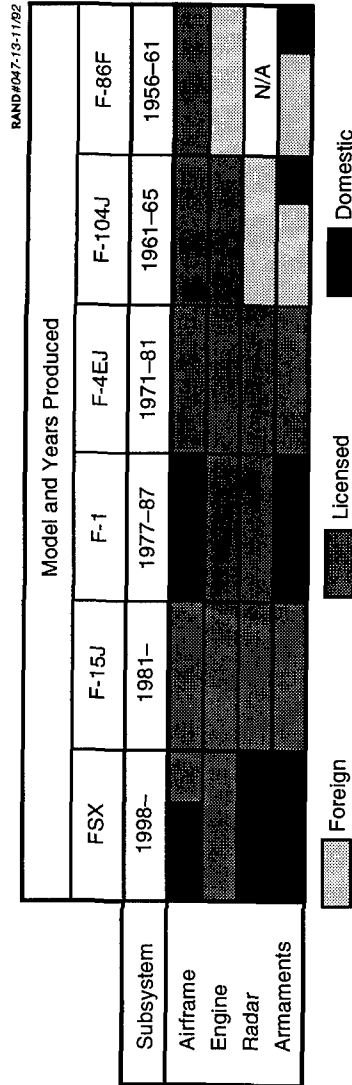


Figure 13—Sources of Japanese Fighter Aircraft Subsystems

tion of major subsystems has made great progress, culminating in the F-15 program, in which Japanese production of the advanced fighter airframe, engine, radar, and missile commenced within six years of initial production by U.S. industry.

Compared to production, domestic development did not make as much progress. The only indigenous Japanese airframe design was the F-1, produced from 1977 to 1987. Developed from the domestic T-2 trainer, the F-1 was not a high-performance aircraft, and MHI was said to have required design assistance from British industry, especially for problems in the air-intake design. Forty-two percent of the parts were produced under license.³¹ Similarly, Japanese industry has never developed an engine for a Japanese fighter aircraft, although it has developed and produced two small engines for jet trainers. The radar system for the license-built F-104 was procured from the U.S., but the radars in the F-1, F-4, and F-15 were produced in Japan under license. In a sharp break with the past, there are plans to indigenously develop and produce the radar on the FSX.

The progress made in Japan's domestic capabilities for developing and producing destroyers has also been mixed. Almost all MSDF hulls, including those of destroyers, have been domestically designed and produced since the beginning of the Japanese postwar rearmament in the early 1950s. This policy of indigenous design, development, and production was abetted by the strength of the Japanese shipbuilding industry, which dominated world markets in the 1960s.

Before the 1973 oil crisis, Japanese industry leaders disliked naval ship construction (even though it used less than 1 percent of industry's capacity) because it kept personnel and dock facilities occupied with low-profit MSDF work, making them unavailable for the more profitable, commercial jobs.³² However, the sharp downturn in commercial activities following the 1973 oil crisis, combined with the stimulus provided by the 1976 *Taiko*, caused naval ship construction

³¹Reinhard Drifte, *Arms Production in Japan: The Military Applications of Civilian Technology* (Westview Press, 1986), p. 54. This percentage may have included engine and electronics parts.

³²*Ibid.*, p. 43.

to become a larger and more desirable share of industry's output. It rose from 0.5 percent in 1976 to 7.6 percent six years later.³³

In contrast to almost every other type of Japanese military hardware, Japanese warships—that is, their hulls—are said to be cheaper than the comparable U.S. and British ships.³⁴ Also, naval ship construction is the only Japanese weapon industry to have made use of the efficient and low-cost production methods of its counterpart civilian industry. The hull, though, represents only about one-third of the value of a modern destroyer. The cost of the Aegis-class destroyer has been placed at ¥130 billion: ¥40 billion for the hull, ¥10 billion for the engines, ¥60 billion for the Aegis combat control system and associated sensors, and ¥20 billion for armaments.³⁵ Most of these other systems are being procured from the U.S.

Figure 14 shows the sources of major equipment items for representative destroyer classes laid down since 1964.³⁶ Japan has an active production history in sonars and radars. The electronics industry has supplied equipment for the commercial ships sold worldwide by Japan's shipbuilding industry, as well as for general sale to commercial shipping. Bottom- and fish-finding sonars are produced in scores of models. Combat sonars are rarer, however, because they require not only a level of performance and complexity that is orders of magnitude beyond the demands of most commercial sonars, but specialized information on the target signatures of potential enemies as well. The general competence and experience of the Japanese sonar producers allowed them to produce American combat sonars under license beginning in the early 1960s. Both active and passive licensed designs were used on the first indigenous Japanese destroyers. Building on this experience, the Japanese were able to incorporate domestic designs in Japanese ships as of the late 1970s.

³³Ibid, Table 3.2, p. 45.

³⁴Ibid., pp. 46–47.

³⁵"Two Major Shipbuilders Fight Over Aegis Destroyer Contract," *Japan Times*, May 28, 1991.

³⁶For conciseness, four classes have been omitted from Figure 14: the Takatsuki class of four ships laid down from 1964 to 1968; the Tachikaze class of three ships laid down from 1973 to 1979; the Minegumo class of three ships, 1967–1968; and the Amatsukaze single-ship class of 1962. The equipment of these classes was similar to that shown in the figure for the corresponding time periods.

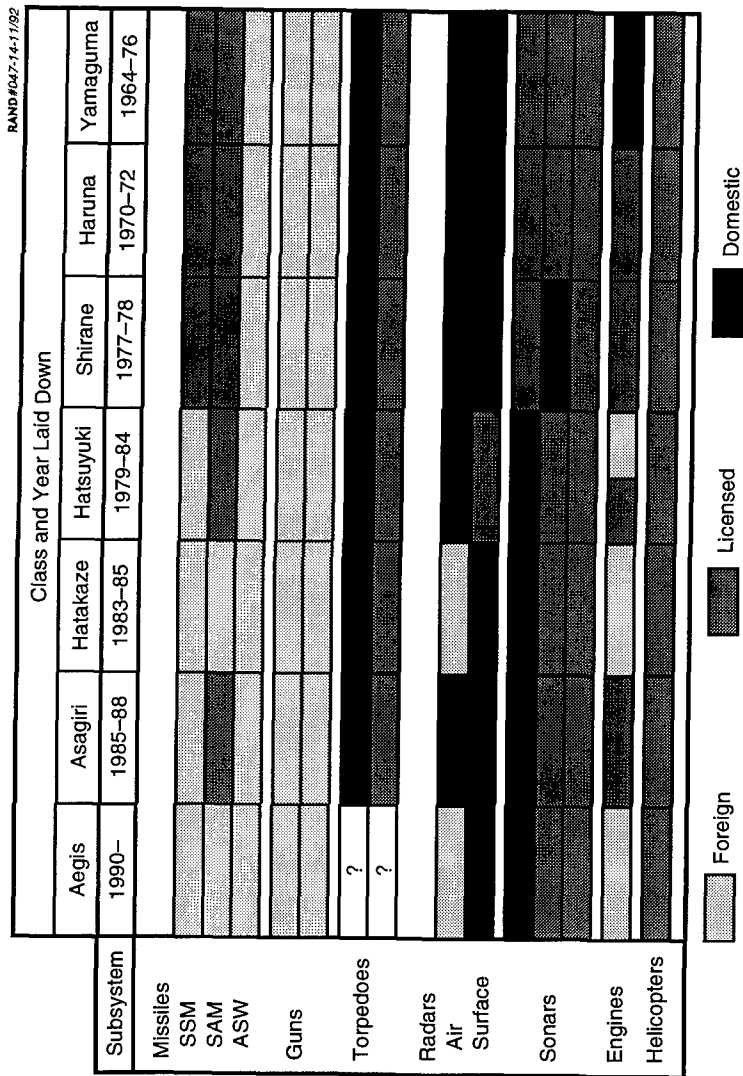


Figure 14—Sources of Japanese Destroyer Subsystems

By 1990, most active sonars were indigenous. The more advanced towed arrays, however, were purchased U.S. models.

Japan's commercial shipborne radar industry provided the design experience and technology necessary for Japan's development of surface-search and navigation radars. The story is different for air-search and fire-control radars, however, because they are tightly tied into complex weapon systems and must meet more stressing levels of performance. They have been a mix of domestic and foreign models, with the foreign products being part of the most advanced foreign-supplied weapon systems. For example, on the Hatakaze-class destroyers, the Hughes Aircraft SPS-52C air-search radar and the Raytheon SPG-51 fire-control radar are tied into the General Dynamics Standard SAM defense system.

Armaments on board Japanese destroyers have tended to be more foreign in their origins than have the electronics used. All missiles have been foreign, except for the license-produced Sea Sparrow, which is based on the airborne AIM-7. Guns, too, have all been foreign, except for the OTO Melara 76-mm gun produced under license in Japan. One domestically designed torpedo, the T-68, has been used in conjunction with the licensed Mk-46. R&D funding limitations have caused other Japanese torpedo development programs to drag on for long periods and ultimately be abandoned in favor of the foreign product.

Propulsion for the earliest classes of Japanese destroyers made use of domestic diesels or steam turbines. However, more recent engines have been either licensed steam and gas turbines or outright purchases of Rolls Royce and General Electric gas turbines that were maritime developments of aviation engines. One major reason for going to foreign sources for large engines is the billion-dollar-plus price for developing such power sources and the almost equally high cost of setting up production. The limited Japanese demand for engines of this size did not warrant local production.

In summary, the hulls and electronics (sonars and radars) have all been domestic designs or licensed productions, with some foreign components. Armaments have tended to be of foreign origin, with most guns and missiles supplied by foreign manufacturers. If there has been any trend in engines, it has been to foreign supply. In short,

the most complex *military* systems have either been supplied directly from abroad or licensed for Japanese production. Native competence has been capitalized on when possible. Over the 30 years since destroyer production began, the overall capabilities of Japanese producers have increased enormously, but with major gaps in important areas of weapon system design.

Table 5 shows the inventory origins of several system types for three points of time: 1970, 1980, and 1990.³⁷ ASDF aircraft are classified into three groups, ranging from the complex and technologically advanced combat aircraft to the simpler trainers. Also included are ASDF and GSDF SAMs and AFVs.

The pattern seen for these systems is similar to that for the subsystems. Two points in particular stand out: (1) in all of the systems, the local contribution (production or development) has grown over the years; and (2) Japanese contributions are greater for the less advanced systems that are closer to civilian counterparts than they are for the more technologically complex and militarily specialized systems. Although these points are not uniform across all systems and time periods, they summarize the broad trends.

This evidence indicates that progress toward indigenous capabilities has been clear and steady although not uniform. With regard to the heavy industrial technologies and the less complex aircraft, Japan's companies have provided a large percentage of the military's needs. For the more complex, specialized systems, they have successfully brought foreign designs into production, but design and development have tended to be foreign, with continued reliance on American experience and R&D.

QUALITATIVE ASSESSMENT

The predominant theme that emerges is that Japan's progress in designing, developing, and producing military systems and subsystems is one of nonuniformity. Among the chief Japanese strengths is the

³⁷The table identifies the origins of the platform or the system itself, not those of the subsystems and components.

Table 5
Origins of Selected Japanese Military Systems

Type of System ^a	Percentage of Force by Source and Year							
	1970				1980			
	Foreign	Licensed	Domestic	Foreign	Licensed	Domestic	Foreign	Licensed
ASDF aircraft								
Combat	0	100	0	4	80	16	3	76
Transport	53	29	17	0	43	57	13	53
Trainers and misc.	0	81	19	0	62	38	3	48
ASDF and GSDF SAMs	55	45	0	27	73	0	11	63
AFVs	78	0	22	5	0	95	0	0

^aCombat aircraft include fighter, attack, and reconnaissance aircraft; transports include fixed-wing vehicles and helicopters; and trainers and miscellaneous include trainers and survey, liaison, search and rescue, and other types of vehicles. SAMs include man-portable as well as fixed and mobile systems (the quantity used in the calculations is for the missiles themselves, not the launchers). AFVs include tanks, APCs, and armored reconnaissance vehicles.

application of civilian technology and competence. In shipbuilding, heavy industry, and electronics, civilian industrial capabilities have been brought to bear on military systems. Even where domestic designs have been absent or deficient, steady progress has been made in producing the most advanced licensed products. It is not an exaggeration to say that the principal strength of Japan's defense industrial sector is its civilian industrial and technological competence, and the principal strength of its civilian industry is production.

The willingness to use foreign technology and designs must also be explicitly acknowledged as an important strength. The ability to successfully move into full-scale production of the most modern types of foreign equipment reflects the excellence of Japanese production skills, engineering, and management. Such strengths have produced considerable Japanese progress toward developing the foundation for a significantly expanded, high-technology arms industry, should international circumstances necessitate such an industry and domestic conditions allow it.

Alongside these strengths are some serious weaknesses, however, one of which is the high cost of production. JDA officials informally estimate the cost of a domestically developed system to be three times the cost of a comparable off-the-shelf foreign design.

Tanks are a good example of the high-cost syndrome of Japanese military products. As products of the well-developed Japanese heavy-industry/automotive sector (rather than the esoteric industries at the high end of performance and technology), tanks ought to be in line with international standards in terms of costs and capabilities. This is not the case, however. At ¥305 million (\$1.33 million in 1979), the T-74 was more than twice as costly as the U.S. M-60, which weighed almost 50 percent more than the T-74. It was estimated at the time that the T-74 was "probably the most expensive main battle tank in the world," although by the time it was produced, it had already fallen behind its contemporaries in terms of its fighting capabilities.³⁸ Of course, an important influence on the cost is the quantity produced. The total production of the T-74 was only about

³⁸Kensuke Iбата, "Japan's Type 74 Main Battle Tank," *International Defense Review*, Vol. 12, No. 9, 1979, p. 1542.

one-tenth the almost 5,000 M-60s produced through 1979. But even if we take into account typical learning-curve effects, large cost differentials remain.³⁹

A decade later, Japanese tank costs have not improved. The T-90, entering production in 1992, will have a production cost estimated in 1987 to be ¥1 billion (\$5 million to \$7 million at exchange rates of ¥140 to ¥200 per dollar).⁴⁰ The cost of the comparable U.S. M-1 tank is \$2.2 million. Adjusting the cost to quantities of 1,000 tanks would reduce the Japanese cost by about one-third (with an 80 percent learning curve), which still leaves the T-90 at a considerable cost disadvantage. Since 1987, the cost estimate for the T-90 has increased to \$7 million to \$9 million.⁴¹

One source of high costs is the low level of tactical experience in using the systems. In the case of the T-74 tank, for example, many subsystems included in the prototype by the engineers had to be dropped from the production model because the costs would otherwise have been even higher. An automatic loader and a number of vision devices were eliminated, the elaborate suspension system was considerably simplified, and a more conventional ballistic computer and stabilization system were installed. Nevertheless, the cost remained very high.

The efficient production methods adopted by the civilian industry have usually not been applied to defense production. Often, the decision not to adopt just-in-time methods and other techniques of low-cost production has been a matter of explicit policy: given the small number of units in most Japanese weapons procurements, production efficiency would enable the entire purchase to be produced in a matter of months. For both national security and industrial policy reasons, the JDA and MITI prefer to stretch out production at low, inefficient rates for many years. Such an approach maintains a "hot" production base that could be expanded

³⁹If we assume quite steep learning effects of 80 percent (i.e., a cost reduction of 20 percent for a doubling of output), the T-74 still comes out to be roughly twice as expensive as the M-60 at a production quantity of 1,000 units.

⁴⁰*Gunji Kenkyu*, November 1987.

⁴¹Caleb Baker, "Japan Packs New Tank with Advanced Features," *Defense News*, December 3, 1990, p. 42.

in an emergency, as well as a cadre of experienced industrial workers and managers. A vivid illustration of this policy is the policy-determined submarine life of 14 years—a lifetime that enables the timely removal of older vessels from the fleet at a rate that preserves stable shipyard employment on new replacement models.

Perhaps the greatest problems connected with Japanese weapons acquisition arise because users are inexperienced in the design and integration of large, advanced, complex military projects. This inexperience is particularly evident in the ASDF. Discussions with ASDF and U.S. Air Force personnel, observation of operations and training, and the study of the generation of several weapons all suggest that the ASDF is a relatively unsophisticated buyer of new systems. It has no combat experience and plans and trains in a benign environment, made even more so by the dictates of Japanese politics. Weapons requirements are therefore often determined more by the technical tastes of TRDI R&D engineers than by tactical and operational needs. Our interviews with TRDI personnel indicated that 40 to 50 percent of TRDI projects are suggested by industry, strongly reflecting commercial motivations.

Weak requirements generation is coupled with inexperienced suppliers. Weapon system design and integration require several kinds of specialized knowledge: (1) knowledge of how systems are used (the tactics of use, the detailed methods of operation, and the means by which equipment is maintained), and (2) knowledge of how to assemble a broad and complex array of subsystems into an integrated total system design that is both affordable and militarily effective.

The phased-array radar is a good example of both the strengths and weaknesses of the Japanese defense industry. Such radars require a blend of several important capabilities: electronics technology, systems architecture, design of supporting software that reflects operational and tactical requirements, and software implementation, or coding. Active phased-array radars of the type planned for the FSX aircraft embody thousands of separate, small transmitter-receiver elements—the radar beam is swept by electronically varying the phase shift of each array element rather than by physically swiveling a radar antenna. The discrete control of each emitter also allows several beams to be formed, tasks to be shifted from one brief time period to

another (as the radar alternates, say, between broad area searching and specific target tracking), and the waveform, frequency, and other transmission and reception parameters to be varied so as to enhance the operating characteristics, counter jamming, or reduce detection.

Emission control requires an understanding of how the system is best used tactically. It requires experience and judgment to address such tactical-design issues as the likely number of targets, their separation in time and space, their radar signatures, the relative importance of different targets, the distance over which precise tracking is required for weapon lock-on and release, the tradeoffs involved in placing the sensors and processing on the weapons (such as missiles) versus on the aircraft platform, and the possible countermeasures that may be used against the radar. These issues have little to do with the electronics per se, but they require a great deal of understanding of how air defense systems are used and integrated into a network of sensors and weapons. After these tactical design issues are specified, they must be implemented in operational software of immense complexity. Software production and verification are now the most expensive and time-consuming portion of phased-array radar development. Although Japanese defense industry engineers are often impressively capable individuals, they have neither the depth of experience nor the organizational backup to design weapons with the highest military effectiveness.

Except in a few areas, Japanese industry and the SDF have not yet gained the experience necessary to operate, design, develop, and produce advanced, cost-effective military systems that meet the standards of worldwide competition. For this reason, Japanese indigenously designed and produced systems will probably continue to be deficient in terms of cost and military effectiveness. That is not the case, however, for many important components and applied technologies.

SUMMARY AND OUTLOOK

Our analysis of Japanese defense resource trends, military industrial policies, and technological capabilities led us to the following main findings:

- Expenditures on defense acquisition and R&D, taken as a whole, have grown rapidly in the past two decades but are likely to grow at much slower rates in the 1990s.
- If the Japanese government decides to put more emphasis on meeting mission and performance requirements than it has in the past, the cost growth in development and production is likely to be even greater than expected.
- Current plans include domestic development of advanced missiles and aircraft that will be much more expensive than earlier systems.
- R&D is planned to grow faster than acquisition in order to cover the full cost of system development. This policy is intended to give the JDA a freer hand in selecting between domestic and foreign producers because it will remove the implicit obligation to compensate companies for unreimbursed R&D.
- Military-industrial policy has focused on the development of aerospace, missiles, and electronics, with current policy emphasizing the transfer of civilian technology to military applications.
- The goals of some military projects may have commercial as well as strictly military objectives.
- Japanese industry has demonstrated great strength in upgrading its ability to produce advanced foreign systems under license and in developing less-advanced systems.
- Japan's defense industry has not mastered the development of more-advanced systems (such as air-to-air missiles) primarily because of low funding, poor incentives, inadequate requirements, and inexperience in the specialized R&D of complex military systems.
- Such difficulties, together with a cost of production often several times more than the cost of purchasing systems from foreign sources, hinder the development of Japan's defense industry. However, the Japanese are developing the industrial base *potential* to support an expanded, high-technology arms industry over time, as international and domestic conditions change and these difficulties are surmounted.

- For the rest of this decade, however, Japan is unlikely to reduce its dependence on U.S. military systems because of all the trends and forces noted above, including the high and increasing costs of development and production, constrained budgets, cost overruns, inexperience, and small production runs.

Many of these findings are part of a larger picture: low R&D funding, small domestic equipment orders, and export prohibitions have led to high costs, limited experience, and reduced capabilities. To the extent that these constraining conditions continue to operate in the future, the capabilities of Japan's defense industry will also be limited.

Despite the desire to foster a competent defense industry that can develop as well as produce the nation's weapons, Japan will not be able to eliminate the effects of these constraints unless the constraints themselves are relaxed. It appears unlikely that Japan will be able to successfully implement a policy of cost-effective domestic development and production of advanced combat aircraft and missiles without first making drastic changes in its present policies and resource commitments, because the forces limiting Japan's defense industry lie outside the narrow realm of policies and levers available to industrial planners in MITI and the JDA. Industrial policy can mitigate but not eliminate the effects of the constraints. Systems will therefore end up with lower performance and higher costs than planned. By implication, they will be less capable in performing their missions, both because of lower-than-planned performance and smaller quantities dictated by high costs.

For example, the FSX could easily weigh much more than now projected because of design problems associated with the unprecedented application of carbon fiber materials to large and complex airframe structures. The higher weight would reduce the aircraft's range and payload. The phased-array radar could also encounter problems of high weight, rising costs, signal processing difficulties, software development problems, and poor knowledge of threat signatures. If such problems were to materialize, the threat detection range would fall, the target tracking and missile guidance capabilities would suffer, and the FSX system would be less able to perform its offensive and defensive missions. Indeed, because the FSX is a much more ambitious project than originally contemplated and brings to-

gether several new and untried subsystems, integration of these subsystems will still be fraught with uncertainty, even if each subsystem works as planned. In all likelihood, the FSX will face a difficult future because Japanese defense decisionmakers have not recognized the difficulty of the program, having confused narrow technological competence with system design and development skills.

Looser fiscal policies could ease the bounds on the Japanese defense industry, but even with considerably expanded budgets, Japan would still continue to operate under highly constrained finances. First, consider the prospects of higher defense budgets. Suppose, for example, that the economy grew at a 5 percent annual rate and that the defense share climbed from 1.0 to 1.5 percent of the GNP over the next ten years. Such a rapid growth would allow acquisition to maintain its present 28 percent share of the defense budget, or even to grow modestly to 30 percent. Under these conditions, acquisition would climb by about 10 percent per year, increasing 2.6 times from 1990 to 2000. If R&D grew to 3.5 percent of defense, the dollar equivalents in 2000 would be \$1.8 billion for R&D and \$14.8 billion for acquisition. These expenditures, however, would still be only 4.8 percent and 18.0 percent of U.S. 1989 levels of R&D and acquisition, respectively. A decade of growth of this magnitude would provide the Japanese military with about \$111 billion in total over the ten years for R&D and acquisition, with about \$11 billion of the total allocated to R&D.

What would \$11 billion in R&D funds buy? Some rough notion of the possible benefits of such a weapons development budget may be gained from the R&D costs of various American systems. The F-18 required (in 1985 values) about \$3.7 billion (without the engine); the F-100 engine in the F-15 and F-16 cost \$2.7 billion; the first "A" model of the CH-47 Chinook helicopter required about \$340 million plus \$100 million for the engine; and subsequent models of the CH-47 required an additional \$550 million plus \$250 million for the engine.⁴² Development of the advanced medium-range air-to-air missile was at least \$1 billion, and about \$900 million was needed to field the first model of the M-1 Abrams tank. It is also revealing to

⁴²These figures are from Arthur J. Alexander, *The Cost and Benefits of Reliability in Military Equipment*, P-7515 (RAND, December 1988).

look at the costs of just improving an existing missile. Development of the AIM-7M (Sparrow III) air-to-air missile cost \$73 million in the late 1970s, and the AIM-9M cost \$36 million in the same period. Improvements to the AIM-54C (Phoenix) required almost \$200 million.⁴³

A decade of booming growth of Japanese military R&D would provide sufficient funds to develop an attack aircraft (without engine), a new tank, an advanced air-to-air missile, a helicopter (with engine), and a handful of smaller systems. Of course, Japanese military R&D could be considerably more efficient than American weapons development, because civilian product development in Japan is often much less costly than similar projects in the U.S. Japanese defense R&D planners are projecting major systems to cost about ¥100 billion (at purchasing-power parity, about \$500 million). An expanded R&D budget would permit fewer than fifteen such "major projects" over the ten-year period, which would exhaust the available funds. Moreover, what the Japanese think of as a "major system" is considerably more modest than many systems developed in programs undertaken by the U.S. defense establishment.

To consider the possibilities for spending \$100 billion in systems acquisition, we did a rough calculation of the cost of filling out the ASDF force posture through the year 2000.⁴⁴ The ten-year aggregate cost for procuring just the major platforms (no spares, support equipment, or ordnance) came to about \$24 billion. The recent ASDF share of 25 to 30 percent of total weapons acquisition would just cover the projected costs, but there would be no funds for other items.

These estimates imply that a rapid buildup in Japanese weapons procurement yielding a real annual growth of almost 10 percent would not be sufficient to fully finance projected buildup plans for the ASDF when all necessary purchases are included. The R&D funds would finance ten major weapons for all the services and perhaps ten to fifteen smaller projects. The Japanese military would certainly gain from such a growth of spending, but it would still be primarily a

⁴³Data Search Associates, *U.S. Weapons Systems Costs, 1990*.

⁴⁴We used the ASDF force posture pictured in Figure 11 (see Chapter 3).

defensive force. Roughly, the ASDF in 2000 could have a fleet somewhat smaller than that of South Korea in 1990.

It is also prudent to consider a slow-growth scenario: an economic growth rate of 4.0 percent and a fall of the defense share of the GNP to 0.8 percent. With the slow growth in defense implied by these assumptions, it would be very difficult for R&D and acquisition to hold their current share of the defense budget in the face of rising personnel costs. For this reason, a fall in the combined share of R&D and acquisition from 30 to 28 percent can be assumed.

Under these assumptions, we project an annual growth rate for procurement of 1.5 percent and a 2000 budget that is barely 16 percent higher than in 1990. The ten-year aggregate of funds available for R&D and acquisition would be about \$64 billion. Assuming that R&D rises to 3.0 percent of the total defense budget, the aggregate ten-year funding level implied by the low estimate would barely support the development of a single major weapon system on the scale of, say, a new aircraft similar to the F-18. It could support several smaller systems (new tank, helicopter, missile) and other generic R&D. For this scenario, the 2000 R&D account would be 50 percent greater than its 1990 counterpart. This growth, however, may exaggerate the true rise in R&D because the acquisition budget and other sources (including private and government funds) formerly supported some of the R&D performed by industry. Also, since Japanese defense planners are considering the development of more-advanced systems than in the past, the cost of development per system would increase. These budgets therefore would not allow much (if any) increase in the number of projects under development.

Acquisition would be similarly constrained: the real unit cost of production or purchase is likely to increase because of the higher performance of each system. Thus, the low-end scenario, while allowing real budgets to grow by 1.5 percent per year, would not permit a real deepening of the force posture, instead allowing only a small qualitative improvement of the existing forces.

Because of budgetary constraints, renewed Japanese interest in acquiring or licensing advanced U.S. systems could be expected. The U.S. dilemma would then concern the release of these systems and technologies for Japanese purchase or production.

In sum, today's Japanese defense industry is retarded by two principal constraints: experience and budgets. The weak experience base results partly from the low budgets of the past and partly from prohibitions on military activities. However, even if Japan's defense budgets were to rise rapidly in the next decade, the absolute level of resources available for R&D and acquisition would still be modest and the experience base would still be low in comparison to the resources and experience base of the European NATO countries.

Japanese policymakers have recognized that the development of major weapon systems is extremely expensive. However, the chosen policy of emphasizing major subsystems is also one of increasing cost, in which development of a state-of-the-art phased-array radar, air-to-air missile, or SAM can require \$1.0 billion. The undeniable strengths of the civilian industry and spin-off technologies are useful adjuncts to Japan's military-industrial efforts, but they cannot compensate in the short to mid term for the powerful constraints now operating on the Japanese defense industry.

PROSPECTS, ALTERNATIVES, AND IMPLICATIONS

The central issue in this report is how the dramatic changes and underlying trends in the international, regional, and domestic environments are likely to affect Japanese security policies in the 1990s. This chapter describes our assessment of Japan's most likely future direction and the main alternatives to this most likely direction. It also examines the implications of these alternative directions for the U.S. Air Force and the U.S. in general. Our assessment suggests a rather different picture than that reflected by those who fear Japan's emergence as a rearmed, militarily independent power.

JAPAN'S MOST LIKELY DIRECTION: A CONTINUING BUT TROUBLED PARTNERSHIP

Barring a major rupture in U.S.-Japan relations over economic or other tensions, current trends suggest a continuation of Japan's *general* policy direction. The fact is that Japan's general approach has been quite successful. The Japanese have gradually built up a significant self-defense capability—i.e., one whose purpose is not to threaten Japan's neighbors, but to provide for the defense of Japanese territory and immediately surrounding areas against small-scale acts of aggression—in the face of strong domestic and regional opposition to Japanese “rearmament.” They have provided a foundation and infrastructure for further military expansion should international conditions make such expansion necessary and domestic conditions allow it to take place. And they have constrained the economic burdens that these efforts entail while ensuring continued U.S. involvement in Japan's defense. Japanese leaders have thus, for

only the second time in their modern history, successfully provided for Japan's external security without endangering either its economic prosperity or political democracy. Indeed, their approach has contributed to the achievement of these latter objectives while facilitating international acceptance of a larger Japanese role in the world community. The success of this policy reinforces bureaucratic inertia and puts the burden of proof on those who argue that major changes are required to meet Japanese national interests.

Japan's fundamental conservatism also bolsters the prospects for continuity. Faced with significantly increased international uncertainties and domestic political, economic, and social difficulties, Japanese leaders will move cautiously. They will keep Japan's basic security framework, including the Constitutional renunciation of war "as a sovereign right of the nation" and ban on the maintenance of "war potential." They will also keep the host of policies adopted over the last three-and-a-half decades that are designed to ensure a continued, but gradual and fundamentally defensive, military buildup. Japanese threat perceptions are likely to move away from the singular preoccupation with Russia toward a more variegated focus on dangers *within* Asia, particularly those related to the Korean peninsula situation and China's future strategic direction. The multitude of such dangers, coupled with continuing uncertainties about the long-term U.S. military presence, will prevent a free fall in Japanese defense spending.

The military capabilities of the SDF will thus continue to improve incrementally, although at a reduced rate compared to that of the past decade because of slower economic growth, downward political pressures on defense spending, and increased priority on manpower, supplies, and logistics. But there will be no major changes in force structure size or overall capabilities. The SDF will remain uniquely defensive in orientation, relatively unbalanced in terms of force structure, and deficient in several critical operational and support areas. Their ability to take over U.S. military roles will remain highly problematic.¹

¹Such an ability hinges on a significant increase in the external military threat, a major improvement in SDF operational capabilities, and a substantial increase in procurement numbers, particularly of offensive assets. Such an ability also requires a

At the same time, indigenous R&D and domestic production will almost surely receive more emphasis than they formerly did, but the rapid growth in procurement expenditures will slow (if not turn negative) over the course of the decade. In the absence of major changes, Japan will not develop a major indigenous arms production capacity, certainly not one that would rule out the need for the U.S. as a major supplier of military systems. If Japan does try to substitute its own systems much beyond current levels, mission capabilities will almost surely suffer. In short, efforts to improve Japan's indigenous defense capabilities will continue, but they will be constrained by political, operational, technical, and resource limitations.

Externally, Japan will seek to maintain close military relations with the U.S. Most Japanese understand that, given their present circumstances, they cannot cope in the world without the U.S. defense commitment. They value close security ties and want U.S. engagement. For this reason, they will continue to support the maintenance of U.S. military bases in Japan (should the U.S. decide to keep them). They will also continue to participate in combined planning and training exercises, which offer benefits to Japan quite apart from just serving the broader, strategic objectives. Japanese leaders will seek a more activist set of foreign policies (especially toward Asia), but they will not seek abrogation of the U.S.-Japan Security Treaty or an independent military role overseas.

Whether the current debate over Japanese participation in international peacekeeping operations will turn into a watershed remains to be seen. At a minimum, Japan will establish some embryonic group that may evolve over time into an "after-hostilities-end" kind of peacekeeping organization. Such an organization would not have major implications for the Japanese force structure, but it would be one manifestation of Japan's continuing desire to contribute to regional and global security as a "member of the West."

Given the dramatic global changes taking place, the increased tensions and potential sources of friction in U.S.-Japan relations, and the changing public attitudes in both Japan and the U.S., this projection may appear somewhat dubious. From a Japanese perspective,

significant increase in the defense budget and expansion of the defense industrial base, as well as major changes in the domestic political environment.

however, at least three factors bolster the prospects for continued security cooperation with the U.S.

The first factor relates to objective environmental conditions. While it is clear that the post-Cold War world will not simply be the Cold War world with minor modifications, it is also clear that important elements of continuity heavily influence Japanese perceptions and policies. These elements include Japan's continuing inability to defend itself single-handedly against external threats (the most recent example being Japan's inability to defend against the ballistic and other tactical missiles now being acquired by many Asian states)²; Japan's fundamental geostrategic isolation and inherent vulnerability; the many uncertainties and potential dangers within the region (symbolized not only by the potential for a major explosion on the Korean peninsula, but by China's new assertiveness over contested offshore territories and its ongoing effort to develop significant power projection capabilities); and the growing economic, budgetary, and political difficulties within Japan itself. Even when the linkage between close security ties with the U.S. and Japan's broader *economic* well-being is not considered, such continuities provide strong incentives for Japan's continued cooperation with the U.S.

The second factor concerns the gap between changes in the global environment and changes in both Japanese and American national interests. Put simply, the former have been far more numerous than the latter, a fact that reflects a more general phenomenon: unlike national *policies*, which can change rapidly in response to external conditions, national *interests* have a more enduring quality. In the case of U.S.-Japan relations, the inherent Japanese interests in maintaining an open international trading system and association with the West dictate close ties with the U.S. Together with the historic U.S. interests in preventing the rise of hostile powers able to dominate critical regions and assuring U.S. military, political, and economic access to and through Asia, these enduring interests will continue to provide a basis for security cooperation between the two countries.

²For an indication of Japan's sensitivity to such missiles, particularly when they can be married to nuclear capability as could be the case in North Korea, see *Defense of Japan*, 1991, p. 46.

Finally, the growth of shared *values* supports continued close Japanese cooperation with the U.S. With all the popular media's emphasis on Japan's "differentness" and "nondemocratic" character, and the objective difficulty Japan has (as a traditional Confucian culture) in acting on the basis of abstract "principles," this notion of shared values is not widely accepted. In fact, however, a sense of shared values has always been an important basis for Japanese security cooperation with the U.S., as is reflected in the U.S.-Japan Security Treaty itself, the keystone of the bilateral relationship. In its first paragraph, the treaty stresses the desire of both countries to "uphold the principles of democracy, individual liberty, and the rule of law." It also stipulates that both countries will contribute to international "peace, security and justice" by "strengthening their free institutions, by bringing about a better understanding of the principles upon which these institutions are founded, and by promoting conditions of stability and well-being." And it pledges extensive cooperation between Japan and the U.S. to "eliminate conflict in their international economic policies," strengthen "individually and in cooperation with each other" their respective abilities to resist armed attack or threats to "international peace and security in the Far East," and "act to meet the common danger" in the event of external aggression.

The emphasis on common values and joint action to uphold these values illustrates how the security relationship transcends a common concern with the Soviet threat and provides a rationale for a close and comprehensive alliance. The growth in the sense of these shared values is best represented by the "Tokyo Declaration" announced by Prime Minister Miyazawa and President Bush in December 1991. This declaration emphasizes the "shared principles" and "enduring values" of "political and economic freedom, democracy, the rule of law, and respect for human rights" and commits Japan to "create an even closer partnership" with the U.S. that is based on these principles and values and reflects both countries' acceptance of their "special responsibility" for building a "just, peaceful, and prosperous world."³

³The Tokyo Declaration actually does more than merely symbolize how far Japan has come. It also reinforces the effort to contain bilateral economic tensions and create a basis for a more encompassing "global partnership." This partnership has a broad

Despite this governmental effort to maintain close military ties with the U.S., however, future bilateral defense relations will face a much rockier road. U.S. military activities will encounter increased constraints, for example, with problem exercises such as night landings and live target practice being phased out or moved elsewhere over the course of the 1990s. Exercises perceived as offensive will in general become increasingly vulnerable. And further U.S.-Japan military integration will be challenged by both political and budgetary constraints, while technology transfers become increasingly hindered by intensified bilateral economic competition.

All of these difficulties will take place in the context of Japan's seeking greater equality in its relations with the U.S. U.S. policies perceived as manifestations of American unilateralism—such as the Super 301 policies in the economic sphere and the lack of consultation prior to U.S. demands for Japanese financial contributions to Desert Storm in the political-military sphere—will be increasingly resented and resisted. Japanese desires for more-equal treatment can be accommodated within the framework of a continuing U.S.-Japan security relationship, but probably only at a higher level of strain and acrimony. If economic tensions get out of hand, or if the more disturbing political and attitudinal trends in the U.S. and Japan become dominant, an ever-widening gap could develop between close military-to-military ties and broader U.S.-Japan relations. At worst, there could be a rupture in the bilateral relationship.

Barring such a development, however, the expectation that Japan will “inevitably” move toward major rearmament and an independent defense posture appears questionable at best. The results of our analysis suggest that Japan will lack both the will and the capabilities needed to achieve such a posture for at least the rest of this decade. This is not to suggest that Japan lacks the *wherewithal* to

mandate: maintain world peace and security, promote development of the world economy, support the worldwide trend to democratization and market-oriented economies, and meet the new set of transnational challenges. The fact that the declaration backs this mandate with “action plans” in both political/security and economic/trade areas covering a wide range of issues (among them, address the proliferation of advanced weapons; promote democratization and economic reform; promote bilateral defense cooperation and interoperability; enhance cooperation on global drug, refugee, and environmental matters; and foster progress in international trade negotiations) makes this document particularly important as a support for Japanese security cooperation with the U.S.

become a major military power should it decide to do so. But, absent major changes, its political *infrastructure* and military *capabilities* are unlikely to give it this status by the end of the decade. Indeed, the 1990s may well represent more of an effort to preserve the gains of the 1980s than to move in any radically new directions.

MAJOR ALTERNATIVE DIRECTIONS

There are, of course, alternatives to what we see as Japan's "most likely" future direction. The collapse of the former Soviet Union and the dramatic improvement in superpower relations have weakened the sense of a common threat that underpinned the U.S.-Japan security relationship, creating new doubts in both countries about the continued value of the alliance. The global communist crisis has made the future of all communist states increasingly uncertain. The situation on the Korean peninsula, long-term prospects for China, and military modernization programs elsewhere in the region involve a range of uncertainties and potential instabilities. Most important, U.S. regional policies are themselves in flux, with growing pressures in Congress for major changes in traditional American approaches. Indeed, whether the U.S. should continue to adhere to a forward-deployed strategy in Asia—perhaps the most basic issue facing the U.S. in this region—is itself being questioned. Japanese perceptions that the U.S. regards Japan more as an enemy than as an ally, coupled with economic difficulties and/or generational, political, and attitudinal changes within Japan, could prompt Japanese leaders to consider alternative security policies.

Based on historic and current trends, we identified three major alternative directions: toward expanded Japanese cooperation with the U.S. in regional and global security (*new global partnership*), toward a "non-dominationist," "omnidirectional" set of policies (*detente defense*), and toward a more "stridently nationalistic" orientation (*autonomous defense*). The first two would generally keep Japan adhering to the "basic defense capability" orientation that has characterized Japanese policies for the last 15 years. The last one would see Japan changing that orientation, replacing it with enhanced military capabilities and an enhanced force posture. Each of these alternatives are described below.

New Global Partnership: Expanded U.S.-Japan Cooperation

A new global partnership orientation would involve a continuation of Japan's basic defense buildup approach and maintenance of close defense ties with the U.S. The principal added element would be a newly developed security concept that would rationalize expanded Japanese military cooperation with the U.S. in the interests of maintaining international and regional security. "Collective security" and "general security" are theoretical examples ("world order" might be a third). Adoption of such a concept would reflect a recognition by the Japanese that the era of "pax Americana" is over and that they must help the U.S. carry the burden of maintaining regional and global security. Just as Japan's experience with the notion of "comprehensive security" in the 1970s helped rationalize a more rapid defense buildup and increase Japanese political support for the Western alliance, adoption of this new concept would facilitate the definition of Japan's role in this larger security effort.

Such a concept would go beyond the current government effort to rationalize Japanese participation in certain kinds of UN-based peacekeeping operations under certain limited conditions. It would allow full Japanese participation in all necessary multinational efforts to repel aggression (such as those in Iraq), as well as enhanced Japanese contributions to regional security more broadly. Such a development assumes a continued Japanese sense of vulnerability, successful management of U.S.-Japan economic tensions, and establishment of a wider basis of political support within Japan. A lengthy process of domestic consensus building would be required, and the LDP would probably have to regain control of the House of Councillors as well. For these reasons, despite the signs that Japan is already moving in this direction, this alternative would probably take some time to develop.

Should Japan opt for this alternative, there would probably be modest but operationally beneficial changes in the Japanese force structure. These would be designed to support more active cooperation overseas and to fill in behind U.S. forces deployed elsewhere. In particular, the Japanese would be likely to give greater emphasis to transport, command and control, and sustainability. They would also seek to further increase their interoperability with the U.S.

Detente Defense: Defense Cutbacks and Policy Equidistance

The end of the Cold War and the dramatic improvements in super-power relations have already ushered in talk of a new world order. Although the specific content of this new order has yet to be spelled out, there is a general awareness that a new era has been entered. The continued Russian occupation of Japan's Northern Territories and qualitative improvements in Russian military capabilities in areas around Japan have thus far inhibited a breakthrough in Russia-Japan relations and any major changes in Japanese threat perceptions. But both developments could happen, adding a new regional detente to the global reduction of tensions, particularly if the tensions on the Korean peninsula lessened as well. Such developments would also intensify pacifist sentiment in Japan and weaken public support for the government's defense buildup program.

Even without a dramatic breakthrough in Russia-Japan relations, however, the tensions in East Asia appear to be significantly reduced. An improved dialogue between Moscow and Tokyo, progress in talks between North and South Korea, resolution of the Cambodian issue, and expanded relations between long-standing regional antagonists (China-Taiwan, China-Vietnam, China-Indonesia, etc.) either have already begun or appear to be on the horizon. Each of these contributes to a general sense of reduced danger and bolsters downward pressures on defense in Japan. Together with continued high levels of tension in U.S.-Japan economic relations, such developments could incline Japanese leaders to seek more-balanced external relations.⁴

In such an environment, Japan would likely move toward a policy of detente defense. Such a policy would involve formal maintenance of Japan's basic security framework, but with the Japanese defense buildup significantly scaled back and its target downgraded to providing no more than internal security and strictly territorial defense.

⁴It is important to recall that Japan's definition of itself as a "member of the West" is a relatively recent phenomenon. Formally it dates only to the spring of 1980, when Prime Minister Ohira told President Carter that problems such as those in Iran and Afghanistan were problems of "world order" and pledged Japan's close cooperation in building "credible alliance relations." Only a short time earlier, a Japanese foreign minister resigned when he was subjected to blistering public criticism for his use of the word "alliance" in reference to the U.S.

Japan's doctrine of "exclusively defensive defense" would be given new emphasis while the SDF paid greater attention to disaster relief, counter-terrorism, and policing national airspace and territorial waters. The U.S.-Japan Security Treaty would be maintained but would probably become increasingly hollow. Japan would return to a more equidistant, omnidirectional foreign policy, as attempted for a brief time in the 1970s under Prime Minister Fukuda, and give greater diplomatic emphasis to Asia. Increased efforts would probably also be made to fashion *Japanese* concepts of international security, with stepped-up efforts to provide regional and global leadership aimed at arms control, nonproliferation, and a non-dominationist approach to the resolution of international disputes.

Autonomous Defense: Nationalism and Military Buildup

For Japan to move in an autonomous defense direction, three conditions would have to be met. First, there would have to be a major increase in Japan's sense of external military threat, such as could come from the return of a more traditional Russian leadership, the advent of an adventurous Chinese regime or re-creation of a bellicose China-Russia alliance, or the development of a nuclear (unified or not) Korea. (A nonnuclear unified Korea, if hostile to Japan, could have a similar but somewhat smaller effect.) Second, there would need to be a general Japanese perception of diminished U.S. commitment or resolve. Continuing U.S. force drawdowns in Asia in the face of increased external dangers, for example, would receive great attention, whereas a full-scale military withdrawal from Asia or a major crisis in U.S.-Japan relations would undermine confidence in the U.S. And third, there would need to be a new political consensus in Japan in support of expanded defense efforts.

An autonomous defense posture would involve significantly enhanced Japanese defense capabilities. The defense buildup target would be upgraded to Japan's being able to defend itself against any conventional attack, and increased efforts would be made to improve Japan's ability to protect its sea lines of communication. Air and especially naval capabilities would be stressed as a reflection of increased priority on the missions of extended air and sea-lane defense, and an effort would be made to enhance force projection and offensive capabilities. Both the ASDF and MSDF would seek to de-

velop major, balanced, world-class forces. Japan would maintain its security alliance with the U.S. (assuming the U.S. agreed to keep it) but would place greater emphasis on strengthening Japan's indigenous military capabilities than on defense cooperation with the U.S.

EFFECTS OF DIRECTIONS ON SDF CAPABILITIES

The baseline and three alternative directions would have very different effects on Japanese military capabilities by the year 2000. The next three figures illustrate what these force structures could be, given past procurement patterns, current Japanese priorities, and our assumptions about political conditions and available resources. In each figure, the current force structure of one of the three Japanese services is compared to that associated with the baseline projection (described in Chapter 3) and the three most likely alternative projections.⁵

Figure 15 shows the ASDF changes. As can be seen, relatively minimal ASDF changes would be involved in a set of policies reflecting a new global partnership. The primary changes would be the addition of a squadron of tactical transports and 10 to 15 tankers and E-3 AWACSS. These items have long been sought by the ASDF and would be greatly welcomed, particularly the tankers. But they would not significantly increase Japan's military power. Far more substantial consequences would accompany any major downward turn in an environment of global detente. The ASDF would probably lose hope of getting any tankers and see substantial reductions in much of its airlift, surveillance, and fighter aircraft.

The force structure shown in Figure 15 for a policy of autonomous defense suggests what the ADF might look like if Japan were determined to build a more balanced air force with comprehensive offensive and support assets. This force structure requires extremely optimistic assumptions about ASDF procurement rates, calling for a

⁵Although meant solely to be illustrative in nature, these projections do give a rough picture of what Japanese force structures might look like under each of the alternative policy directions.

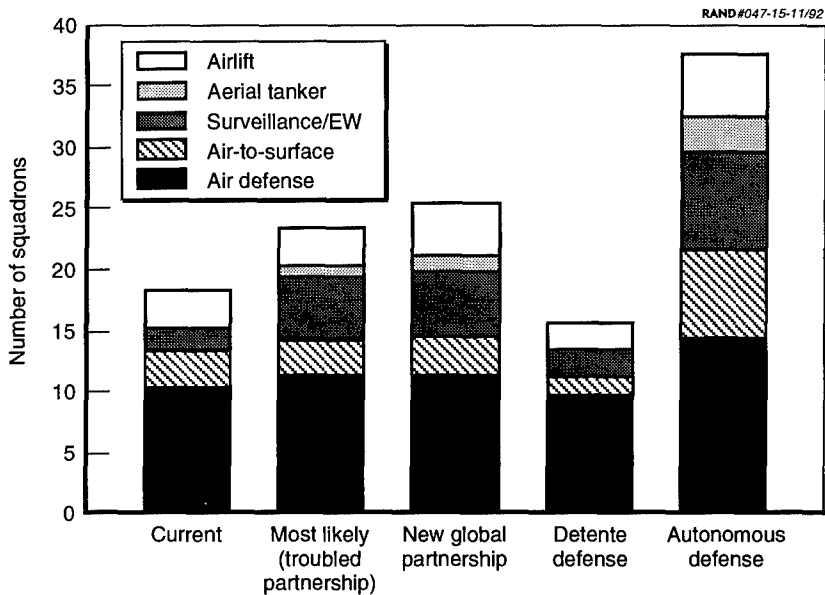


Figure 15—Illustrative ASDF Projections for Year 2000

40 percent increase in air defense fighter assets and a greater than 100 percent increase in offensive fighter squadrons over the next decade. It also requires the procurement of 250 more fighter and attack aircraft than are called for by the baseline projection (an increase of more than 250 percent), as well as considerably more AWACSS, tankers, and tactical transports. Such an effort would be both enormously expensive and highly destabilizing. But if Japan were to move in this direction, it would gain the ability to assume at least some of the roles currently assumed by the U.S. Air Force in Japan's defense.

As Figure 16 shows, the MSDF projections present a similar picture. The baseline projection assumes that the buildup under way in the 1980s will continue through the 1990s at roughly the same rate, with no major changes in force structure priorities. It is quite possible that this buildup could be slowed down and scaled back in the face

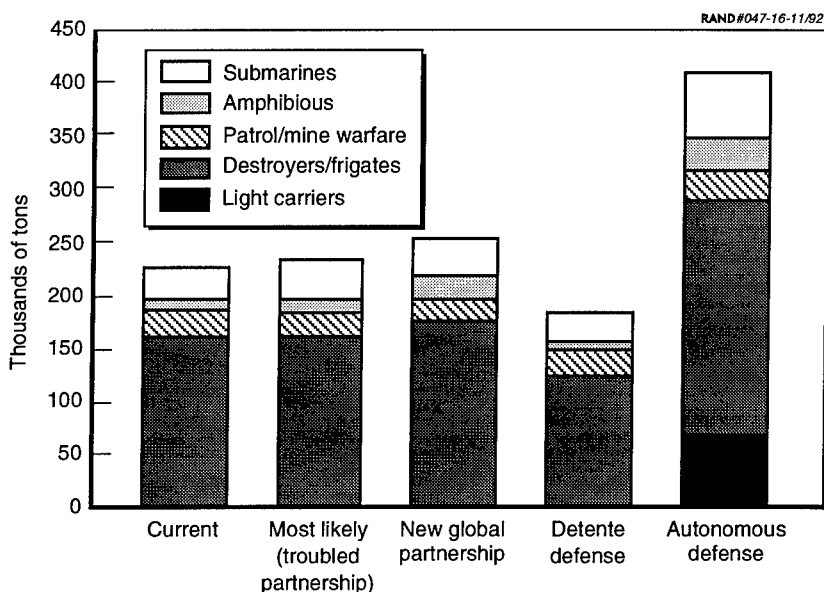


Figure 16—Illustrative MSDF Projections for Year 2000

of increasing downward pressures on defense spending, but this most likely direction would not produce a force structure *larger* than the one projected here.

For the new global partnership, there would be a modest increase in naval capabilities above the level associated with the baseline projection. Three principal surface combatants, including one additional Aegis destroyer, could be procured beyond the 23 new ones projected in the baseline case. Additional amphibious support could also be included. In contrast, were Japan to move toward a detente defense set of policies, the MSDF could experience a decline of over 20 percent in total tonnage, with Aegis procurement being cut in half and the procurement of all other major categories (except ships for coastal patrol and mine warfare) being significantly reduced.

An autonomous defense policy would see the MSDF become a world-class navy. The MSDF would acquire two Invincible-class carriers and one smaller carrier, would increase its helicopter and

other frigates to protect the carrier battle groups, and would significantly expand its fleet of diesel submarines. Such a huge buildup would give the MSDF by the end of the 1990s roughly the same tonnage as the British Royal Navy has today.

Figure 17 shows the projections for the GSDF. For the baseline direction, the GSDF would have better-quality equipment (e.g., new-generation MBTs, etc.), but there would be little quantitative change except in terms of tactical missiles and attack helicopters. However, continuation of recent trends could hinder even these improvements and occasion further GSDF force structure reductions. Under a global partnership policy, greater emphasis would be given to mobility and mobile fire power. The big changes would come with the two other alternatives: for detente defense, manpower shortages and

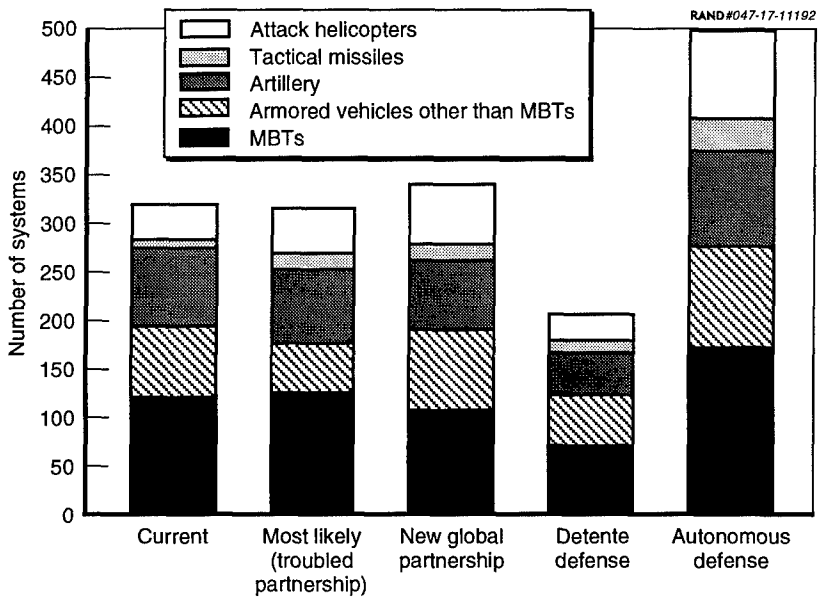


Figure 17—Illustrative GSDF Projections for Year 2000

the high cost of personnel could lead to a major cutback in almost all categories of equipment (as well as in the total authorized troop strength); for autonomous defense, greater emphasis on offensive fire power and mobility could add significantly to the GSDF capabilities. Interestingly, though, the GSDF produced by this last direction would still be modest by current West European standards, as well as compared to Japan's continental neighbors.

OTHER DIRECTIONS

Two other possible directions also stand out: unarmed neutrality and independence. Both are part of the historic Japanese defense debate, and each continues to attract a small but loyal following. If for no other reason than that these two directions bound the range of possible outcomes, they warrant consideration. And the history of the past several years suggests that situations can change much more rapidly, and in very different ways, than generally expected.

For Japan to adopt a policy of unarmed neutrality, there would have to be a major reduction in both global and regional sources of conflict, an effective international policing mechanism, a leftist, JSP type of government in Japan, and a significant deterioration in U.S.-Japan relations. Should Japan move in such a direction, it would stress reducing and restructuring the SDF and would focus on internal security. It would also seek to abrogate the U.S.-Japan Security Treaty or to replace it with some sort of friendship or nonaggression agreement.

For Japan to move toward true independence, including some sort of second-strike nuclear capability, there would have to be a dramatic increase in Japanese perceptions of imminent external threat *and* a complete loss of confidence in the U.S. security commitment (and probably a rupture in U.S.-Japan relations). An independent defense policy would emphasize naval power and power projection capabilities, in addition to some kind of nuclear deterrent. It would probably also involve abrogation of the U.S.-Japan Security Treaty or at least a major distancing of Japan from the U.S. Even if the Japanese were determined to move in this direction, it is unlikely that their defense infrastructure could support such a policy for many years.

In the context of dominant trends over the past two decades, neither of these directions—unarmed neutrality and independence—seems very likely. If one of them were taken, however, Japan would obviously become a very different kind of actor than it is today.

IMPLICATIONS

Our findings have a number of implications for the U.S. Air Force and, more generally, U.S. policy. At a minimum, they raise questions about the validity of key U.S. regional defense planning assumptions. In three out of what we regard as the four most likely future Japanese directions (the baseline projection of a continuing but troubled partnership, the new global partnership, and detente defense), Japan will probably lack the capabilities needed to achieve the goals it sets for itself in extended air and sea-lane defense. Other assumptions on which regional defense planning is predicated will also need to be revisited, as will those underpinning U.S. global defense planning more broadly.

By the same token, the only direction that will provide Japan the capabilities needed to take over significant U.S. roles is the fourth one, autonomous defense. Whether movement in this direction would be in U.S. interests, however, is highly problematic. On the other hand, *outside of a Russian context*, Japan's capabilities in three of the four most likely projections (all but detente defense) should be sufficient for handling any direct conventional threat to Japan proper. This finding suggests that the order of magnitude of Japanese capabilities is probably about right, and that the U.S. should emphasize greater integration, interoperability, and sustainability rather than major quantitative increases in Japan's force structure and military power.

Japan's increasing emphasis on domestic production and the increasing U.S. interest in controlling key technologies will continue to create problems for both Japan and the U.S. Japan must either use older, lower-performance systems of U.S. design or develop its own systems at additional cost and probably reduced capability. Politically, the U.S. technology controls raise questions about whether Japan can count on the U.S. for advanced systems and technologies. Restricted access, coupled in particular with asymmetric treatment

of Japan by the U.S., encourages those in Japan who advocate the development of domestic systems.

For the U.S., the increased Japanese emphasis on domestic production could pose new standardization and interoperability problems. At the same time, cost savings that used to accrue to the U.S. as a result of Japanese equipment purchases could become less significant. Systems fielded by the U.S., moreover, could end up lacking in capability, either because they do not incorporate the best technologies and component designs available or because they do not take advantage of efficient production processes mastered by Japan's civilian industries. Notwithstanding the difficulties involved, both sides would stand to gain—especially in an era of declining procurement budgets—from any progress that can be made toward achieving a meaningful two-way technological exchange.

At a more thematic level, the U.S. needs to factor into its thinking about Japan the likelihood of a major drawdown by the superpowers from Asia. Underlying trends suggest that Russian and American force reductions already under way may be considerably more far-reaching than generally expected. The outcome could be a region that for the first time since the Korean War is free of a major superpower military presence. What Japan would do in such an environment could contribute to a power vacuum within the region or, at the other end of the spectrum, help generate a new long-term threat to U.S. interests. For either contingency, close U.S.-Japan military ties are critical to regional stability.

More broadly, the U.S. will have to pay more than usual attention to the U.S.-Japan relationship to keep it going through the decade. Most Japanese continue to see this relationship as the key to regional security, as well as to regional economic progress. The Bush administration has reaffirmed its own awareness of the centrality of the bilateral relationship to U.S. regional policies. But the ground is shifting as attitudes toward the alliance undergo significant changes in both Japan and the U.S. Many Japanese and Americans are coming to doubt the value of enhanced cooperation, and each group is growing suspicious of the other's motives. As the U.S. looks to the future, the external and domestic political environments are likely to be far less tolerant than they were in the latter 1970s and the 1980s. The task will be to draw Japan into a larger cooperative relationship

while demonstrating clearly to the public in both countries the benefits of continued close relations.

Finally, the U.S. needs to remember its own importance. The world has clearly entered an era of historic transformation. The dramatic changes in the former Soviet Union and Eastern Europe have altered not only the global power equation, but the structure of international relations. Political relationships are beginning to change in Asia as well, as countries begin to jockey for position in the new order. But one thing that has not changed is the centrality of the U.S. to Japanese calculations. Indeed, positing a radically different kind of Japan presupposes a radically different kind of U.S.-Japan relationship. In this sense, while it is certainly true that Japan's future direction will be the product of many influences, U.S. policies and the state of U.S.-Japan relations are likely to constitute the single most important determinant. As the U.S. plans its responses to the emerging world order, it needs to keep this importance firmly in mind.