One—
The Japanese "Miracle"

By common agreement among the Japanese, the "miracle" first appeared to them during 1962. In its issues of September 1 and 8, 1962, the *Economist* of London published a long two-part essay entitled "Consider Japan," which it later brought out as a book that was promptly translated and published in Tokyo as *Odorokubeki Nihon* (Amazing Japan). Up to this time most Japanese simply did not believe the rate of economic growth they were achieving—a rate unprecedented in Japanese history—and their pundits and economists were writing cautionary articles about how the boom would fail, about the crises to come, and about the irrationality of government policy. [1] Yet where the Japanese had been seeing irresponsible budgets, "over-loans," and tremendous domestic needs, the *Economist* saw expansion of demand, high productivity, comparatively serene labor relations, and a very high rate of savings. Thus began the praise, domestic and foreign, of the postwar Japanese economy—and the search for the cause of the "miracle."

First, some details on the miracle itself. Table 1 presents indices of industrial production for the entire period of this study, 1925 to 1975, with 1975 as 100. It reveals several interesting things. The miracle was actually only beginning in 1962, when production was just a third of what it would be by 1975. Fully half of Japan's amazing economic strength was to be manifested after 1966. The table also shows clearly the "recessions" of 1954, 1965, and 1974 that spurred the government to new and even more creative economic initiatives; and it demonstrates the ability of the Japanese economy to come back even more strongly from these periods of adversity. Intersectoral shifts are also recorded: the decline of mining as coal gave way to oil and the move-

TABLE 1
Indices of Japanese Mining and Manufacturing Production, 1926–1978
(1975 = 100)

						Manufacturing industries										
Year	All industry	Public utilities	Mining and manu-facturing	Mining	All manu-facturing	Iron and steel	Non-ferrous metals	Metal finished goods	Ma-chinery	Ceramics and cement	Chem-icals	Petro- leum and coal products	Pulp and paper	Textiles	Wood and wood products	Food
1926		2.5		54.5		1.5	4.0				1.5	0.7	4.9	17.4		
1927		2.8		59.7		1.7	4.1				1.7	0.8	5.3	18.8		
1928		3.3		62.0		2.0	4.6				1.8	1.0	5.8	18.1		
1929		3.6		63.2		2.2	4.6				2.2	1.0	6.4	18.9		
1930	5.5	3.9	5.8	62.0	5.3	2.1	4.8		1.4	8.4	2.5	1.0	5.5	21.8	15.8	21.0
1931	5.0	4.0	5.2	58.8	4.7	1.8	4.4		1.1	8.5	2.6	1.1	5.3	23.0	15.2	19.0
1932	5.3	4.3	5.5	60.0	5.0	2.3	4.9		1.0	9.2	3.2	1.2	5.3	24.9	16.0	20.8
1933	6.4	4.9	6.7	68.6	6.1	3.1	5.7		1.4	10.3	3.7	1.4	5.8	28.6	18.8	22.3
1934	6.9	5.3	7.2	75.1	6.5	3.7	5.6		1.4	10.0	4.3	1.7	5.4	31.5	24.0	22.5
1935	7.3	6.0	7.6	81.0	6.9	4.4	6.7		1.4	11.6	5.2	1.8	5.9	33.4	26.4	22.5
1936	8.2	6.5	8.6	89.6	7.8	4.9	7.4		1.7	12.0	6.2	2.1	7.0	35.8	27.6	23.0
1937	9.6	7.1	10.0	97.5	9.2	5.7	8.7		2.3	12.7	7.1	2.5	8.0	40.8	27.9	25.2
1938	9.9	7.7	10.3	103.8	9.4	6.5	9.1		2.5	13.5	8.1	2.7	7.2	33.6	27.5	25.5
1939	10.9	8.1	11.4	108.8	10.5	7.2	10.3		3.1	14.2	8.6	3.2	8.3	33.6	32.2	26.1
1940	11.4	8.3	12.0	116.7	11.0	7.3	10.1		3.8	14.7	8.5	3.4	8.3	30.4	26.8	22.7
1941	11.8	9.1	12.4	117.1	11.3	7.5	9.6		4.4	13.1	8.5	4.0	8.5	24.6	33.5	19.7
1942	11.5	9.1	12.0	114.4	11.0	7.9	10.9		4.5	10.8	7.1	4.0	6.7	19.5	31.7	17.5
1943	11.7	9.2	12.1	115.5	11.1	8.9	13.3		5.0	9.6	6.1	4.0	5.7	12.7	28.0	14.5
1944	11.9	9.0	12.4	105.1	11.4	8.3	14.7		5.8	7.5	5.7	3.2	3.3	6.8	24.8	11.9
1945	5.2	5.4	5.3	55.5	4.8	2.9	5.5		2.5	2.9	2.3	0.9	1.6	2.6	14.8	7.9
1946	2.3	6.9	2.2	40.9	1.8	1.0	2.9		0.8	3.1	1.4	0.4	1.7	4.3	22.7	7.0
1947	2.9	7.8	2.7	54.0	2.3	1.3	4.0		0.9	3.8	1.9	0.5	2.4	5.8	29.9	6.3
1948	3.8	8.5	3.6	66.2	3.0	2.1	5.5		1.4	5.8	2.5	0.8	3.5	6.6	34.7	7.7

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Year	All industry	Public utilities	Mining and manu-facturing	Mining	All manu-facturing	Iron and steel	Non-ferrous metals	Metal finished goods	Ma-chinery	Ceramics and cement	Chem-icals	Petro- leum and coal products	Pulp and paper	Textiles	Wood and wood products	Food
1949	4.8	9.6	4.6	75.7	4.0	3.7	6.3		1.7	7.6	3.5	0.9	4.9	8.9	34.8	11.7
1950	5.9	10.3	5.7	80.0	5.1	5.1	7.3		1.8	9.0	4.7	1.7	6.7	12.6	36.5	13.1
1951	8.0	11.0	7.8	91.4	7.1	6.9	8.8		2.9	12.5	6.3	2.8	9.1	17.9	54.7	16.8
1952	8.6	11.9	8.4	94.4	7.7	7.1	9.3		3.0	13.0	6.9	3.6	10.4	20.3	58.2	17.2
1953	10.4	12.7	10.2	101.2	9.5	8.4	9.9		3.8	15.4	8.6	4.6	13.3	24.4	55.7	26.3
1954	11.2	13.5	11.1	97.5	10.4	8.8	11.5		4.3	17.5	9.8	5.4	14.5	26.5	54.6	28.5
1955	12.1	14.5	11.9	98.0	11.3	9.8	12.2		4.3	17.7	11.3	6.2	16.6	29.6	54.4	30.3
1956	14.9	16.7	14.6	108.3	13.9	12.0	14.7		6.2	21.5	13.6	8.0	19.2	35.2	60.8	32.0
1957	17.3	18.6	17.3	119.3	16.5	13.6	16.4		8.7	25.3	16.0	9.6	21.7	38.9	64.1	30.7
1958	17.4	19.7	17.3	115.7	16.6	12.8	16.0	15.6	9.3	23.9	16.0	10.0	21.3	34.8	61.8	35.6
1959	20.9	22.6	20.8	114.6	20.1	17.0	21.0	19.2	12.0	28.3	18.5	12.4	27.9	40.6	65.9	37.7
1960	26.0	26.5	25.9	125.2	25.3	22.4	27.8	24.4	16.5	25.7	22.3	15.8	33.6	47.9	73.2	39.9
1961	31.0	30.8	31.0	134.0	30.4	28.3	33.3	28.8	21.4	41.5	25.5	19.0	40.5	51.7	77.5	43.1
1962	33.5	32.9	33.6	137.0	32.9	28.3	32.5	30.3	24.0	45.3	29.2	21.4	43.4	54.5	79.3	46.6
1963	37.3	36.0	37.4	135.9	36.7	31.9	37.2	34.0	26.5	48.1	32.2	25.6	48.0	58.6	83.8	57.8
1964	43.2	40.6	43.3	137.1	42.6	39.7	45.6	39.6	32.3	55.5	36.6	30.3	54.5	64.8	88.9	62.7
1965	44.9	43.3	44.9	135.2	44.3	40.8	45.3	40.5	32.8	57.1	40.1	34.8	55.7	69.4	90.0	66.7
1966	50.7	47.6	50.8	143.1	50.2	47.2	51.0	48.0	38.1	62.2	45.3	40.0	62.5	76.4	95.4	73.1
1967	60.5	54.0	60.7	141.0	60.2	61.1	61.6	58.6	49.6	72.8	53.0	48.1	69.6	83.3	102.5	76.8
1968	69.7	59.6	70.1	142.1	69.6	68.4	74.3	71.0	61.5	81.4	62.6	56.9	76.9	88.4	107.0	78.7
1969	80.7	67.0	81.3	142.9	80.9	82.6	86.6	84.0	74.8	90.3	73.7	67.9	86.6	97.0	113.9	83.6
1970	91.8	75.9	92.5	139.2	92.2	94.2	93.8	96.9	87.7	101.0	86.8	79.8	98.2	105.2	118.7	89.9
1971	94.3	80.6	94.9	131.6	94.6	91.2	95.7	100.1	89.8	102.6	91.6	87.4	100.6	109.4	117.1	92.6
1972	101.1	87.4	101.8	121.9	101.6	98.7	108.4	111.0	87.3	109.5	97.2	91.5	106.7	110.8	120.7	97.8
1973	116.2	97.4	117.0	112.8	117.0	118.8	128.6	133.4	117.4	126.5	110.2	106.6	119.3	118.5	122.1	98.6
1974	111.7	97.3	112.3	105.8	112.4	116.9	112.6	123.0	116.2	117.0	109.9	104.4	113.7	106.1	109.1	97.5
1975	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1976	111.0	108.5	111.1	100.0	111.2	109.5	119.3	116.8	113.7	110.4	111.5	102.7	113.3	108.4	106.8	101.1
1977	115.6	113.7	115.7	103.1	115.7	108.1	125.0	124.9	121.3	115.2	117.2	104.7	115.3	106.7	104.4	104.6
1978	122.7	119.9	122.8	105.9	123.0	110.1	135.0	134.9	131.5	121.0	131.0	104.0	120.8	107.7	107.0	106.1

SOURCE: Mainichi Shimbun Sha, ed., *Showa * shi jiten* (Dictionary of Showa* History), Tokyo, 1980, p. 457.

ment from textiles to machinery and finished metal products, a movement the Japanese call heavy and chemical industrialization (*jukagaku * kogyoka**).

If we use a slightly different base line—for example, if we take 1951–53 to be 100—then the index of gross national product for 1934–36 is 90; for 1961–63, 248; and for 1971–73, 664; and the index of manufacturing production for 1934–36 is 87; for 1961–63, 400; and for 1971–73, 1,350. Over the whole postwar era, 1946 to 1976, the Japanese economy increased 55-fold.[2] By the end of our period Japan accounted for about 10 percent of the world's economic activity though occupying only 0.3 percent of the world's surface and supporting about 3 percent of the world's population. Regardless of whether or not one wants to call this achievement a "miracle," it is certainly a development worth exploring.

Many voyagers have navigated these waters before me, and a survey of their soundings is a necessary introduction to this study and to my particular point of view. The task of explaining Japanese economic growth—and its repeated renewals after one or another set of temporary advantages had been exhausted or removed—is not easy, as the frequent use of the term "miracle" suggests; and the term cannot be isolated and applied only to the high-speed growth that began in 1955. As early as 1937 a much younger Prof. Arisawa Hiromi (b. 1896), one of the people who must be included on any list of the two or three dozen leading formulators of postwar industrial policy, used the phrase "Japanese miracle" to describe the increase of 81.5 percent in Japanese industrial output from 1931 to 1934.[3] Today we know why that particular miracle occurred: it resulted from the reflationary deficit financing of Finance Minister Takahashi Korekiyo, who at 81 was assassinated by young military officers on the morning of February 26, 1936, for trying to apply the brakes to the process he had started.

This earlier miracle is nonetheless problematic for scholars because of what Charles Kindleberger refers to as "the riddle" of how Japan "produced Keynesian policies as early as 1932 without a Keynes."[4] Some Japanese have not been overly exercised by this riddle; they have simply settled for calling Takahashi the "Keynes of Japan."[5] As I hope to make clear in this book, this kind of sleight of hand will not do; there was more to state intervention in the thirties than Keynesianism, and Arisawa and his colleagues in the government learned lessons in their formative years that are quite different from those that make up what has come to be known in the West as mainstream governmental fiscal policy.

Kindleberger's "riddle" does serve to draw attention to the projectionists, one major category among modern explorers of the Japanese economic miracle. These are writers who project onto the Japanese case Western—chiefly Anglo-American—concepts, problems, and norms of economic behavior. Whatever the value of such studies for the countries in which they were written, they need not detain us long here. This type of work is not so much aimed at explaining the Japanese case (although it may abstract a few principles of Japanese political economy) as it is at revealing home-country failings in light of Japan's achievements, or at issuing warnings about the possible effects of Japan's growth on other parts of the world. Even the *Economist*'s brilliant little tract of 1962 might better have been called *Consider Britain in Light of What the Japanese Are Doing*, which was in any case its true purpose. Successors to the *Economist* include Ralph Hewins, *The Japanese Miracle Men* (1967), P. B. Stone, *Japan Surges Ahead: The Story of an Economic Miracle* (1969), Robert Guillain, *The Japanese Challenge* (1970), Herman Kahn, *The Emerging Japanese Superstate* (1970), and Hakan Hedberg, *Japan's Revenge* (1972). Perhaps the most prominent work in this genre, because it is so clearly hortatory about what Americans might learn from Japan rather than analytical about what has caused the phenomenal Japanese growth, is Ezra Vogel's *Japan as Number One: Lessons for Americans* (1979). My study does not follow these earlier works in advocating the adoption of Japanese institutions outside of Japan. It does, however, try to lay out in their full complexity some of the main Japanese institutions in the economic field so that those who are interested in adopting them will have an idea of what they are buying in terms of the Japanese system's consequences—intended, unintended, and even unwanted.

A second and entirely different set of explanations of the Japanese miracle belongs to the socioeconomic school, or what I have sometimes called the "anything-but-politics" approach to "miracle" research. This broad school includes four major types of analysis that often overlap with each other but that are clearly isolable for purposes of identification, although they rarely appear in pure form. These are the "national character-basic values-consensus" analysis favored by humanists in general and the anthropologically oriented in particular; the "no-miracle-occurred" analysis, chiefly the work of economists; the "unique-structural-features" analysis promoted by students of labor relations, the savings ratio, corporate management, the banking system, the welfare system, general trading corporations, and other institutions of modern Japan; and the various forms of the "free-ride" analysis, that is, the approach that stresses Japan's real but transitory advantages in launching high-speed growth in the postwar world.

Before proceeding to sketch the qualities of these types of analysis, let me say that to a certain extent I can agree with all of them. My interest is not in disputing the facts that they have revealed nor in questioning their relevance to the miracle. However, I believe it can be shown that many of them should be reduced to more basic categories of analysis, particularly to the effects of state policy, and that they need to be weighed according to standards different from those used in the past, thereby giving greater weight to the state and its industrial policy.

The national-character explanation argues that the economic miracle occurred because the Japanese possess a unique, culturally derived capacity to cooperate with each other. This capacity to cooperate reveals itself in many ways—lower crime rates than in other, less homogeneous societies; subordination of the individual to the group; intense group loyalties and patriotism; and, last but not least, economic performance. The most important contribution of the culture to economic life is said to be Japan's famous "consensus," meaning virtual agreement among government, ruling political party, leaders of industry, and people on the primacy of economic objectives for the society as a whole—and on the means to obtain those objectives. Some of the terms invented to refer to this cultural capability of the Japanese are "rolling consensus," [6] "private collectivism,"[7] "inbred collectivism,"[8] "spiderless cobweb,"[9] and "Japan, Inc."[10]

My reservations about the value of this explanation are basically that it is overgeneralized and tends to cut off rather than advance serious research. Consensus and group solidarity have been important in Japan's economic growth, but they are less likely to derive from the basic values of the Japanese than from what Ruth Benedict once called Japan's "situational" motivations: late development, lack of resources, the need to trade, balance of payments constraints, and so forth.[11] Positing some "special capacity to cooperate" as an irreducible Japanese cultural trait leads inquiry away from the question of *why* Japanese cooperate when they do (they did not cooperate during almost half of the period under study here), and away from the probability that this cooperation can be, and on occasion has been, quite deliberately engineered by the government and others. David Titus's research into the use of the Imperial institution in prewar Japan to "privatize" rather than to "socialize" societal conflict is one creative way to look at this problem of consensus.[12]

Many instances to be discussed later in this study illustrate how the government has consciously induced cooperation among its clients—with much better results than during the Pacific War, when it sought to control them. In the final analysis it is indeed probable that Japanese basic values are different from those of the Western world, but this needs to be studied, not posited; and explanations of social behavior in terms of basic values should be reserved for the final analysis, that is, for the residue of behavior that cannot be explained in other more economical ways. Actually, the explanation of the Japanese economic miracle in terms of culture was more prevalent a few years ago, when the miracle had occurred only in Japan. Now that it is being duplicated or matched in the Republic of Korea, Taiwan, Hong Kong, and Singapore—and perhaps even in some non-East Asian nations—the cultural explanation has lost much of its original interest. [13]

Exemplars of the "no-miracle-occurred" school of analysis do not literally assert that nothing happened to Japan's economy, but they imply that what did happen was not miraculous but a normal out growth of market forces. They come from the realm of professional economic analyses of Japanese growth, and therefore in their own terms are generally impeccable, but they also regularly present extended conclusions that incorporate related matters that their authors have not studied but desperately want to exclude from their equations. Hugh Patrick argues, "I am of the school which interprets Japanese economic performance as due primarily to the actions and efforts of private individuals and enterprises responding to the opportunities provided in quite free markets for commodities and labor. While the government has been supportive and indeed has done much to create the environment for growth, its role has often been exaggerated."[14] But there is a problem, he concedes. "It is disturbing that the macro explanations of Japanese postwar economic performance—in terms of increases in aggregate labor and capital inputs and in their more productive allocation—leave 40 percent plus of out put growth and half of labor productivity growth unexplained."[15] If it can be shown that the government's industrial policy made the difference in the rate of investment in certain economically strategic industries (for instance, in developing the production and successful marketing of petrochemicals or automobiles), then perhaps we may say that its role has not been exaggerated. I believe this can be demonstrated and I shall attempt to do so later in this study.

Many Japanese would certainly dispute Patrick's conclusion that the government provided nothing more than the environment for economic growth. Sahashi Shigeru, former vice-minister of MITI (the Ministry of International Trade and Industry), asserts that the government is responsible for the economy as a whole and concludes, "It is an utterly self-centered [businessman's] point of view to think that the government should be concerned with providing only a favorable environment for industries without telling them what to do." [16] There have been occasions when industries or enterprises revolted against what the government told them to do—incidents that are among the most sensational in postwar politics—but they did not, and do not, happen often enough to be routine.

Discussions of the Japanese economy in purely economic terms seem to founder on their assumptions rather than on their analyses. It is assumed, for example, that the Japanese developmental state is the same thing as the American regulatory state. Philip Trezise argues, "In essentials, Japanese politics do not differ from politics in other democracies."[17] But one way they differ is in a budgetary process where appropriations *precede* authorizations and where, "with the single exception of 1972, when a combination of government mishandling and opposition unity led to small reductions in defense spending, the budget has not been amended in the Diet since 1955"; before that there was no pretense that the Diet did anything more than rubber-stamp the bureaucracy's budget.[18]

Another difference between Japan and the United States is to be found in the banking system. Before the war the rate of owned capital of all corporations in Japan was around 66 percent—a rate comparable to the current U.S. rate of 52 percent—but as late as 1972 the Japanese rate of owned capital was around 16 percent, a pattern that has persisted throughout the postwar period. Large enterprises obtain their capital through loans from the city banks, which are in turn over loaned and therefore utterly dependent on the guarantees of the Bank of Japan, which is itself—after a fierce struggle in the 1950's that the bank lost—essentially an operating arm of the Ministry of Finance. The government therefore has a direct and intimate involvement in the fortunes of the "strategic industries" (the term is standard and widely used, but not in the military sense) that is much greater than a formal or legal comparison between the Japanese and other market systems would indicate. MITI was not just writing advertising copy for itself when in 1974 it publicly introduced the concept of a "plan-oriented market economy system," an attempt to name and analyze what it had been doing for the previous twenty years (the twenty years before that it had spent perfecting the system by trial and error).[19] The plan-oriented market economy system most decidedly includes some differences from "politics in other democracies," one of them being the care and feeding of the economic miracle itself.

The "no-miracle-occurred" school of miracle researchers agrees that Japanese economic growth took place but insists that this was because of the availability of capital, labor, resources, and markets all interacting freely with each other and unconstrained in any meaningful ways. It rejects as contrary to economic logic, and therefore as spurious, all the concepts that the Japanese have invented and employed continuously in discussing and managing their economy—such concepts as "industrial structure," "excessive competition," "coordination of investment," and "public-private cooperation." Most seriously, from a historical point of view, this explanation short-circuits attempts to analyze what difference the government's intervention has actually made by declaring in advance and as a matter of principle that it made no difference. The result is, as John Roberts has put it, that Japan's " 'miraculous' emergence as a first-rate economic power in the 1960s has been described exhaustively by Japanese and foreign writers, and yet very little of the literature provides credible explanations of how it was done, or by whom." [20] This study is an attempt to answer these questions.

The third prevalent type of analysis of the Japanese miracle—stressing the influence of unusual Japanese institutions—is by far the most important of the four I have isolated, and the one that has been most thoroughly discussed in Japan and abroad. In its simplest form it asserts that Japan obtained a special economic advantage because of what postwar Japanese employers habitually call their "three sacred treasures"—the "lifetime" employment system, the seniority (*nenko**) wage system, and enterprise unionism.[21] Amaya Naohiro of MITI, for example, cites these three institutions as the essence of what he terms Japan's *uchiwa* (all in the family) economic system; and in reporting to the Organization for Economic Cooperation and Development's Industry Committee during 1970, the former MITI vice-minister Ojimi* Yoshihisa referred to various "typically Japanese phenomena" that had helped Japan to obtain its high-speed growth—the phenomena again being the three sacred treasures.[22] Because of these institutions, the argument goes, Japan obtains greater labor commitment, loses fewer days to strikes, can innovate more easily, has better quality control, and in general produces more of the right things sooner than its international competitors.

This argument is undoubtedly true, but it has never been clearly formulated and is, at best, simplistic. There are several points to be made. First, the three sacred treasures are not the only "special institutions," and they are certainly not the most sacred. Others include the personal savings system; the distribution system; the "descent from heaven" (*amakudari*) of retired bureaucrats from the ministries into senior management positions in private enterprises; the structure of industrial groupings (*keiretsu*, or the oligopolistic organization of each industry by conglomerates); the "dual economy" (what Clark usefully terms the system of "industrial gradation" [23]) together with the elaborate structure of subcontracting it generates; the tax system; the extremely low degree of influence exercised over companies by shareholders; the hundred-odd "public policy companies" (public corporations of several different forms); and, perhaps most important of all, the government-controlled financial institutions, particularly the Japan Development Bank and the "second," or investment, budget (the Fiscal Investment and Loan Plan).[24]

It is unnecessary here to describe each of these institutions. Most of them are quite familiar even to novice Japan watchers, and others will be analyzed in detail later in this book since they constitute some of the primary tools of the government for influencing and guiding the economy. What needs to be stressed is that they constitute a system—one that no individual or agency ever planned and one that has developed over time as ad hoc responses to, or unintended consequences of, Japan's late development and the progrowth policies of the government. Taken together as a system, they constitute a formidable set of institutions for promoting economic growth (a "GNP machine," in Amaya's metaphor), but taken separately, as they most commonly are, they do not make much sense at all.[25] And this is the primary reservation that one must make about the unique-institutions explanation: it never goes far enough and therefore fails as anything more than a partial explanation.

Let us take one example. As a result of the recognition of the Japanese miracle around the world, some American professors of business administration have begun to recommend to American entrepreneurs that they experiment with one or all of the three sacred treasures. Sometimes Japanese practices, suitably modified, travel well.[26] However, an American businessman who really attempted to institute "lifetime" employment without the backing of the other institutions of the Japanese system would soon find himself bankrupt. Among other things, lifetime employment in Japan is not for life but until the middle or late fifties; and although wage raises are tied to seniority, job security is not: it is those with most seniority who are the first fired during business downturns because they are the most expensive. Lifetime employment also does not apply to the "temporaries," who may spend their entire working lives in that status, and temporaries constitute a much larger proportion of a firm's work force than any American union would tolerate (42 percent of the Toyota Motor Company's work force during the 1960's, for example).[27]

Even if these problems could be taken care of, the American employer still would not have below him the extensive enterprise sector of medium and smaller subcontractors that his Japanese counterpart can squeeze in difficult times. Tomioka calls the subcontractors the "shock absorbers" of the Japanese business cycle—the smaller firms on the receiving end when large firms find they can no longer carry the fixed costs of their labor force and must "shift the strain" (*shiwayose*). [28] On the other hand, the American employee would not have Japan's extensive if redundant distribution system to fall back on in case he did get laid off. The distribution system in Japan serves as a vast sponge for the unemployed or underemployed when economic conditions require it. As testimony to the layers of middlemen in Japan, the volume of transactions among Japanese wholesalers in 1968 exceeded the total of retail sales by a ratio of 4.8 to 1, whereas the United States figure was 1.3 to 1.[29] It is not surprising that many knowledgeable Japanese do not want to change the distribution system, despite protests from foreign salesmen who have trouble breaking into it, because it performs other functions for the society than distribution, not the least of which is reducing the tax burden necessary to provide adequate unemployment insurance.

Lifetime employment, Japanese style, offers many advantages from the point of view of economic growth: it provides a strong incentive to the employer to operate at full or close to full capacity; it inhibits a horizontally structured trade union movement; and, in the words of Ohkawa and Rosovsky, it gives the Japanese entrepreneur "a labor force without incentives to oppose technological and organizational progress even of the labor-saving type."[30] But it does not exist in isolation and would not work without the rest of the system of "unique institutions."

The second main point about these special institutions concerns the date of their origins and how they are maintained. It is here that this school of explanations of the miracle sometimes blends imperceptibly with the first school, which says that Japanese culture and the Japanese national character support the economy. Amaya, for example, traces the three sacred treasures to the traditional world of family (*ie*), village (*mura*), and province (*kuni*), which he believes have all been homogenized and reincarnated today within the industrial enterprise.[31] It has to be stated that assertions of this type are a form of propaganda to defend these special institutions from hostile (often foreign) critics. Extensive research by scholars in Japan and abroad has demonstrated that virtually all of the so-called special institutions date from the twentieth century and usually from no earlier than the World War I era.

Lifetime employment, for example, has been traced to several influences, including the efforts during World War I to inhibit the growth of a left-wing social reform movement; the introduction of large numbers of Korean and Taiwanese laborers during the 1920's, which caused Japanese workers to seek job security at all costs; and the wartime munitions companies, which had to guarantee the jobs of their best employees in order to keep them. R. P. Dore, one of the leading authorities on Japanese industrialism, summarizes the state of research on this subject as follows: "Japan's employment system in 1900 was pretty much as market-oriented as Britain's. It was conscious institutional innovation which began to shape the Japanese system in the first two decades of this century, perfected the system of enterprise familism (or what one might call corporate paternalism) in the 1930s, and revamped the system to accommodate the new strength of unions in the late 1940s to produce what is called [by Dore] the 'welfare corporatism' of today." [32]

Nakamura Takafusa finds the roots of a whole range of important institutions in the wartime control era—including the bank-centered keiretsu (industrial groups based on the Designated Financial Organs System of the time) and the subcontracting system, which though it existed before the war was greatly strengthened by the forced mergers of medium and small enterprises with big machinery manufacturers (the so-called *kigyo* seibi*, or "enterprise readjustment," movement discussed in Chapter 5).[33]

There are several ways in which the government has influenced the structure of Japan's special institutions. Many of these institutions it created directly in the course of its "industrial rationalization" campaigns of the 1930's or in the prosecution of the Pacific War. When the government did not create them directly, it nonetheless recognized their usefulness for its own purposes and moved to reinforce them. The savings system is an example. It is possible, as many commentators have urged, that the savings of private Japanese households—the highest rate of savings as a share of GNP ever recorded by any market economy in peacetime—is due to the natural frugality of the Japanese. But there are some strong external pressures that encourage the Japanese to save: a comparatively poor social security system; a wage system that includes large lump-sum bonus payments twice a year; a retirement system that cuts a worker's income substantially before he reaches the age of 60; a shortage of new housing and housing land, as well as a premium on university education for one's children, both of which require large outlays; an underdeveloped consumer credit system; a government-run postal savings system with guaranteed competitive interest rates; the lack of a well-developed capital market or other alternatives to personal saving; and a substantial exemption from income taxes for interest earned on savings accounts. The government is quite aware of these incentives to save and of the fact that money placed in the postal savings system goes directly into Ministry of Finance accounts, where it can be reinvested in accordance with government plans. Innate frugality may indeed play a role in this system, but the government has worked hard at engineering that frugality.

The theory of the "free ride," our fourth category of explanations, argues that Japan is the beneficiary of its postwar alliance with the United States, and that this alliance accounts at least for the miraculous part of Japan's rapid economic growth, if not for all of it. There are three ways in which Japan is said to have enjoyed a free ride: a lack of defense expenditures, ready access to its major export market, and relatively cheap transfers of technology.

Although it is true that Japan has not had to devote much of its national income to armaments, this factor cannot have influenced its growth rate significantly. If Japan's overall rate of investment had been very low—as low, for example, as it was in China—then the demands of defense could have had a retarding effect. But in Japan, where capital formation exceeded 30 percent of GNP during high-speed growth, the effect of low defense expenditures was negligible. The cases of South Korea and Taiwan, which have been pursuing the high investment strategy of the Japanese with equal or even more spectacular results, illustrate this point: their very high defense expenditures have had little or no impact on their economic performance.

The case of exports is more important. Japan profited enormously from the open trading system that developed throughout the world after World War II, and Japanese government leaders have repeatedly acknowledged the favorable effects for them of such institutions as the General Agreement on Tariffs and Trade, the International Monetary Fund, and, until 1971, stable exchange rates—all institutions that they had no role in creating. In fact, in their more pessimistic moods MITI leaders have speculated on the historical observation that Japan's great economic achievements came in the relatively open periods of world commerce—from the Meiji Restoration to World War I and from 1945 to 1970—and they have expressed concern that the post-1970's era could look like 1920–45 when seen in historical perspective. [34]

Nonetheless, the important point for our discussion is that Japan's growth did not depend nearly so much on exports as it did on the development of the domestic market (a market half the size of the

United States' in terms of population). Eleanor Hadley notes that although Japan's economy in the early sixties was roughly three times the size of the 1934–36 economy, exports as a proportion of GNP were only about two-thirds what they had been in the mid-1930's. [35] By the late 1960's Japan's exports were only 9.6 percent of GNP, compared for example with Canada's 19.8 percent.[36] From 1953 to 1972 Japan had a consistently lower dependency on exports and imports as a percentage of GNP at constant prices than France, Germany, Italy, Britain, or OECD Europe as a whole. Japan's exports ran at about 11.3 percent of GNP, and its imports at 10.2 percent, whereas the OECD European figures were 21.2 percent and 20.9 percent respectively.[37] There is no question that Japan, as a heavily populated resource-deficient country, has to export in order to pay for its vital imports, but foreign sales were not the main factor driving its economic activity during high-speed growth.

Home demand led Japan's growth for the twenty years after 1955. The demand was there, of course, before 1955, but with the coming to power of the Ishibashi government in December 1956 and Ikeda Hayato's return to the post of minister of finance, Ishibashi and Ikeda launched the policy of "positive finance." Under the slogan "a hundred billion yen tax cut is a hundred billion yen of aid" as the basis for the fiscal 1957 budget, Ikeda opened up domestic demand as it had never been opened before.[38] Balance of payments problems slowed positive finance during the "bottom-of-the-pot" recession (with its trough in June 1958), but the economy responded quickly to government discipline and rebounded in the Iwato Boom (July 1958-December 1961), during which Ikeda became prime minister and launched the Income-doubling Plan. The propelling force of the economy in this and later periods was private corporate investment nurtured by favorable expectations for the longer term that were created by the government; it was not export sales.

Technology transfers—the third alleged "free ride"—were not exactly free, but there can be no question that they were crucial to Japanese economic growth and that the prices paid were slight compared with what such technology would cost today, if it could be bought at any price. Japan imported virtually all of the technology for its basic and high-growth industries, and it imported the greater proportion of this technology from the United States. But it is trivial and misleading to refer to this movement of patent rights, technology, and know-how across the Pacific and from Europe as a "free ride." It was, in fact, the heart of the matter.

The importation of technology was one of the central components of postwar Japanese industrial policy, and to raise the subject is to turn the discussion to MITI and the Japanese government's role. Before the capital liberalization of the late 1960's and 1970's, no technology entered the country without MITI's approval; no joint venture was ever agreed to without MITI's scrutiny and frequent alteration of the terms; no patent rights were ever bought without MITI's pressuring the seller to lower the royalties or to make other changes advantageous to Japanese industry as a whole; and no program for the importation of foreign technology was ever approved until MITI and its various advisory committees had agreed that the time was right and that the industry involved was scheduled for "nurturing" (*ikusei*).

From the enactment of the Foreign Capital Law in 1950 (it remained on the books for the next thirty years), the government was in charge of technology transfers. What it did and how it did it was not a matter of a "free ride" but of an extremely complex process of public-private interaction that has come to be known as "industrial policy." MITI is the primary Japanese government agency charged with the formulation and execution of industrial policy.

Thus I come to the final school, in which I place myself, the school that stresses the role of the developmental state in the economic miracle. Although the rest of this book is devoted to this subject—and to some of the nonmiracles produced by the developmental state in its quest for the miracle—several further points are needed by way of introduction. What do I mean by the developmental state? This is not really a hard question, but it always seems to raise difficulties in the Anglo-American countries, where the existence of the developmental state in any form other than the communist state has largely been forgotten or ignored as a result of the years of disputation with Marxist-Leninists. Japan's political economy can be located precisely in the line of descent from the German Historical School—sometimes labeled "economic nationalism," *Handelspolitik*, or neomercantilism; but this school is not exactly in the mainstream of economic thought in the English-speaking countries. Japan is therefore always being studied as a "variant" of something other than what it is, and so a necessary prelude to any discussion of the developmental state must be the clarification of what it is not.

The issue is not one of state intervention in the economy. All states intervene in their economies for various reasons, among which are protecting national security (the "military-industrial complex"), insuring industrial safety, providing consumer protection, aiding the weak, promoting fairness in market transactions, preventing monopolization and private control in free enterprise systems, securing the public's interest in natural monopolies, achieving economies of scale, preventing excessive competition, protecting and rearing industries, distributing vital resources, protecting the environment, guaranteeing employment, and so forth. The question is how the government intervenes and for what purposes. This is one of the critical issues in twentieth-century politics, and one that has become more acute as the century has progressed. As Louis Mulkern, an old hand in the Japanese banking world, has said, "I would suggest that there could be no more devastating weakness for any major nation in the 1980s than the inability to define the role of government in the economy." [39] The particular Japanese definition of this role and the relationship between that role and the economic miracle are at once major components and primary causes of the resurgent interest in "political economy" in the late twentieth century.

Nowhere is the prevalent and peculiarly Western preference for binary modes of thought more apparent than in the field of political economy. In modern times Weber began the practice with his distinction between a "market economy" (*Verkehrwirtschaft*) and a "planned economy" (*Planwirtschaft*). Some recent analogues are Dahrendorf's distinction between "market rationality" and "plan rationality," Dore's distinction between "market-oriented systems" and "organization-oriented systems," and Kelly's distinction between a "rule-governed state" (*nomocratic*) and a "purpose-governed state" (*telocratic*).[40] I shall make use of several of these distinctions later, but first I must stress that for purposes of the present discussion the right-hand component of these pairs is *not* the Soviet-type command economy. Economies of the Soviet type are not *plan rational* but *plan ideological*. In the Soviet Union and its dependencies and emulators, state ownership of the means of production, state planning, and bureaucratic goal-setting are not rational means to a developmental goal (even if they may once have been); they are fundamental values in themselves, not to be challenged by evidence of either inefficiency or ineffectiveness. In the sense I am using the term here, Japan is plan rational, and the command economies are not; in fact, the history of Japan since 1925 offers numerous illustrations of why the command economy is not plan rational, a lesson the Japanese learned well.

At the most basic level the distinction between market and plan refers to differing conceptions of the functions of the state in economic affairs. The state as an institution is as old as organized human society. Until approximately the nineteenth century, states everywhere performed more or less the same functions that make large-scale social organization possible but that individuals or families or villages cannot perform for themselves. These functions included defense, road building, water conservancy, the minting of coins, and the administration of justice. Following the industrial revolution, the state began to take on new functions. In those states that were the first to industrialize, the state itself had little to do with the new forms of economic activity but towards the end of the nineteenth century the state took on *regulatory* functions in the interest of maintaining competition, consumer protection, and so forth. As Henry Jacoby puts it, "Once capitalism transformed the traditional way of life, factors such as the effectiveness of competition, freedom of movement, and the absence of any system of social security compelled the state to assume responsibility for the protection and welfare of the individual. Because each man was responsible for himself, and because that individualism became a social principle, the state remained as almost the only regulatory authority." [41]

In states that were late to industrialize, the state itself led the industrialization drive, that is, it took on *developmental* functions. These two differing orientations toward private economic activities, the regulatory orientation and the developmental orientation, produced two different kinds of government-business relationships. The United States is a good example of a state in which the regulatory orientation predominates, whereas Japan is a good example of a state in which the developmental orientation predominates. A regulatory, or market-rational, state concerns itself with the forms and procedures—the rules, if you will—of economic competition, but it does not concern itself with substantive matters. For example, the United States government has many regulations concerning the antitrust implications of the size of firms, but it does not concern itself with what industries ought to exist and what industries are no longer needed. The developmental, or plan-rational, state, by contrast, has as its dominant feature precisely the setting of such substantive social and economic goals.

Another way to make this distinction is to consider a state's priorities in economic policy. In the plan-rational state, the government will give greatest precedence to industrial policy, that is, to a concern with the structure of domestic industry and with promoting the structure that enhances the nation's international competitiveness. The very existence of an industrial policy implies a strategic, or goal-oriented, approach to the economy. On the other hand, the market-rational state usually will not even have an industrial policy (or, at any rate, will not recognize it as such). Instead, both its domestic and foreign economic policy, including its trade policy, will stress rules and reciprocal concessions (although perhaps influenced by some goals that are not industrially specific, goals such as price stability or full employment). Its trade policy will normally be subordinate to general foreign policy, being used more often to cement political relationships than to obtain strictly economic advantages.

These various distinctions are useful because they draw our attention to Japan's emergence, following the Meiji Restoration of 1868, as a developmental, plan-rational state whose economic orientation was keyed to industrial policy. By contrast, the United States from about the same period took the regulatory, market-rational path keyed to foreign policy. In modern times Japan has always put emphasis on an overarching, nationally supported goal for its economy rather than on the particular procedures that are to govern economic activity. The Meiji-era goal was the famous *fukokukyohei* * (rich country, strong military) of the late nineteenth and early twentieth centuries. This was followed during the 1930's and 1940's by the goals of depression recovery, war preparation, war production, and postwar recovery. From about 1955, and explicitly since the Income-doubling Plan of 1960, the goal has been high-speed growth, sometimes expressed as "overtake Europe and America" (*Obei* * *ni oikose*). Amaya lists the goals of the past century in detail: *shokusan kogyo** (increase industrial production), *fukoku-kyohei* (rich country, strong military), *seisanryoku kakuju** (expand productive capacity), *yushutsu shinko** (promote exports), *kanzen koyo** (full employment), and *kodo* * *seicho** (high-speed growth).[42] Only during the 1970's did Japan begin to shift to a somewhat regulatory, foreign-policy orientation, just as America began to show early signs of a new developmental, industrial-policy orientation. But the Japanese system remains plan rational, and the American system is still basically market rational.[43]

This can be seen most clearly by looking at the differences between the two systems in terms of economic and political decision-making. In Japan the developmental, strategic quality of economic policy is reflected within the government in the high position of the so-called economic bureaucrats, that is, the officials of the ministries of Finance, International Trade and Industry, Agriculture and Forestry, Construction, and Transportation, plus the Economic Planning Agency. These official agencies attract the most talented graduates of the best universities in the country, and the positions of higher-level officials in these ministries have been and still are the most prestigious in the society. Although it is influenced by pressure groups and political claimants, the elite bureaucracy of Japan makes most major decisions, drafts virtually all legislation, controls the national budget, and is the source of all major policy innovations in the system. Equally important, upon their retirement, which is usually between the ages of 50 and 55 in Japan, these bureaucrats move from government to powerful positions in private enterprise, banking, the political world, and the numerous public corporations—a direction of elite mobility that is directly opposite to that which prevails in the United States. [44] The existence of a powerful, talented, and prestige-laden economic bureaucracy is a natural corollary of plan rationality.

In market-rational systems such as the United States, public service does not normally attract the most capable talent, and national decision-making is dominated by elected members of the professional class, who are usually lawyers, rather than by the bureaucracy. The movement of elites is not from government to the private sector but vice versa, usually through political appointment, which is much more extensive than in Japan. The real equivalent of the Japanese Ministry of International Trade and Industry in the United States is not the Department of Commerce but the Department of Defense, which by its very nature and functions shares MITI's strategic, goal-oriented outlook. In fact, the pejorative connotations in the United States of terms such as "Japan, Inc." are similar to those surrounding the domestic expression "military-industrial complex" referring to a close working relationship between government and business to solve problems of national defense. (Not to be outdone, some Japanese have taken to calling the Japanese government-business relationship a "bureaucratic-industrial complex.")[45] American economic decisions are made most often in Congress, which also controls the budget, and these decisions reflect the market-rational emphasis on procedures rather than outcomes. During the 1970's Americans began to experiment with industrial policy bureaucracies such as the Department of Energy, but they are still rather wary of such organizations, whose prestige remains low.

Another way to highlight the differences between plan rationality and market rationality is to look at some of the trade-offs involved in each approach. First, the most important evaluative standard in market rationality is "efficiency." But in plan rationality this takes lower precedence than "effectiveness." Both Americans and Japanese tend to get the meanings of efficiency and effectiveness mixed up. Americans often and understandably criticize their official bureaucracy for its inefficiency, failing to note that efficiency is not a good evaluative standard for bureaucracy. Effectiveness is the proper standard of evaluation of goal-oriented strategic activities.[46] On the other hand, Japanese continue to tolerate their wildly inefficient and even inappropriate agricultural structure at least in part because it is mildly effective: it provides food that does not have to be imported.

Second, both types of systems are concerned with "externalities," or what Milton Friedman has called "neighborhood effects"—an example would be the unpriced social costs of production such as pollution. In this instance, however, the plan-rational system has much greater difficulty than the market-rational system in identifying and shifting its sights to respond to effects external to the national goal. The position of the plan-rational system is like that of a military organization: a general is judged by whether he wins or loses. It would be good if he would also employ an economy of violence (be efficient), but that is not as important as results. Accordingly, Japan persisted with high-speed industrial growth long after the evidence of very serious environmental damage had become common knowledge. On the other hand, when the plan-rational system finally shifts its goals to give priority to a problem such as industrial pollution, it will commonly be more effective than the market-rational system, as can be seen in the comparison between the Japanese and American handling of pollution in the 1970's.

Third, the plan-rational system depends upon the existence of a widely agreed upon set of overarching goals for the society, such as high-speed growth. When such a consensus exists, the plan-rational system will outperform the market-rational system on the same benchmark, such as growth of GNP, as long as growth of GNP is the goal of the plan-rational system. But when a consensus does not exist, when there is confusion or conflict over the overarching goal in a plan-rational economy, it will appear to be quite adrift, incapable of coming to grips with basic problems and unable to place responsibility for failures. Japan has experienced this kind of drift when unexpected developments suddenly upset its consensus, such as during the "Nixon shocks" of 1971, or after the oil shock of 1973. Generally speaking, the great strength of the plan-rational system lies in its effectiveness in dealing with routine problems, whereas the great strength of the market-rational system lies in its effectiveness in dealing with critical problems. In the latter case, the emphasis on rules, procedures, and executive responsibility helps to promote action when problems of an unfamiliar or unknown magnitude arise.

Fourth, since decision-making is centered in different bodies in the two systems—in an elite bureaucracy in one and in a parliamentary assembly in the other—the process of policy change will be manifested in quite different ways. In the plan-rational system, change will be marked by internal bureaucratic disputes, factional infighting, and conflict among ministries. In the market-rational system, change will be marked by strenuous parliamentary contests over new legislation and by election battles. For example, the shift in Japan during the late 1960's and throughout the 1970's from protectionism to liberalization was most clearly signaled by factional infighting within MITI between the "domestic faction" and the "international faction." The surest sign that the Japanese government was moving in a more open, free-trade direction was precisely the fact that the key ministry in this sector came to be dominated by internationalistic bureaucrats. Americans are sometimes confused by Japanese economic policy because they pay too much attention to what politicians say and because they do not know much about the bureaucracy, whereas Japanese have on occasion given too much weight to the statements of American bureaucrats and have not paid enough attention to Congressmen and their extensive staffs.

Looked at historically, modern Japan began in 1868 to be plan rational and developmental. After about a decade and a half of experimentation with direct state operation of economic enterprises, it discovered the most obvious pitfalls of plan rationality: corruption, bureaucratism, and ineffective monopolies. Japan was and remained plan rational, but it had no ideological commitment to state ownership of the economy. Its main criterion was the rational one of effectiveness in meeting the goals of development. Thus, Meiji Japan began to shift away from state entrepreneurship to collaboration with privately owned enterprises, favoring those enterprises that were capable of rapidly adopting new technologies and that were committed to the national goals of economic development and military strength. From this shift developed the collaborative relationship between the government and big business in Japan. In the prewar era this collaboration took the form of close governmental ties to the zaibatsu (privately owned industrial empires). The government induced the zaibatsu to go into areas where it felt development was needed. For their part the zaibatsu pioneered the commercialization of modern technologies in Japan, and they achieved economies of scale in manufacturing and banking that were on a par with those of the rest of the industrial world. There were many important results of this collaboration, including the development of a marked dualism between large advanced enterprises and small backward enterprises. But perhaps the most important result was the introduction of a needed measure of competition into the plan-rational system.

In the postwar world, the reforms of the occupation era helped modernize the zaibatsu enterprises, freeing them of their earlier family domination. The reforms also increased the number of enterprises, promoted the development of the labor movement, and rectified the grievances of the farmers under the old order, but the system remained plan rational: given the need for economic recovery from the war and independence from foreign aid, it could not very well have been otherwise. Most of the ideas for economic growth came from the bureaucracy, and the business community reacted with an attitude of what one scholar has called "responsive dependence." [47] The government did not normally give direct orders to businesses, but those businesses that listened to the signals coming from the government and then responded were favored with easy access to capital, tax breaks, and approval of their plans to import foreign technology or establish joint ventures. But a firm did not have to respond to the government. The business literature of Japan is filled with descriptions of the very interesting cases of big firms that succeeded without strong governmental ties (for example, Sony and Honda), but there are not many to describe.

Observers coming from market-rational systems often misunderstand the plan-rational system because they fail to appreciate that it has a political and not an economic basis. During the 1960's, for example, when it became fashionable to call the Japanese "economic animals," the most knowledgeable foreign analysts avoided the term because, in Henderson's words, there was "no doubt that Japan's center of gravity is in the polity not the economy—a source of puzzlement for Japan's numerous economic determinists of various Marxist stripe in academia and opposition politics."[48] One did not have to be an economic determinist or a Marxist to make this error; it was ubiquitous in English-language writing on Japan.

J. P. Nettl's comment on Marx is relevant to this point: "The notion that 'the modern state power is merely a committee which manages the common business of the bourgeoisie' is one of the historically least adequate generalizations that Marx ever made."[49] It is not merely historically inadequate; it obscures the fact that in the developmental state economic interests are explicitly subordinated to political objectives. The very idea of the developmental state originated in the situational nationalism of the late industrializers, and the goals of the developmental state were invariably derived from comparisons with external reference economies. The political motives of the developmental state are highlighted by Daniel Bell's observation—based on Adam Smith—that there would be little stimulus to increase production above necessities or needs if people were ruled by economic motives alone.[50] "The need for economic growth in a developing country has few if any economic springs. It arises from a desire to assume full human status by taking part in an industrial civilization, participation in which *alone* enables a nation or an individual to compel others to treat it as an equal. Inability to take part in it makes a nation militarily powerless against its neighbors, administratively unable to control its own citizens, and culturally incapable of speaking the international language." [51]

All of these motives influenced Meiji Japan, and there were others that were peculiar to Japan. Among these was one deriving from the treaties Japan was forced to conclude after its first contacts with Western imperialism in the nineteenth century: Japan did not obtain tariff autonomy until 1911. This meant that Japan was not able to aid its developing industries by the protective duties and other practices recommended by the market-oriented theories of the time, and the Meiji government consequently concluded that it had to take a direct hand in economic development if Japan was ever to achieve economic independence.[52]

A second special problem for Japan lasted until the late 1960's, when it temporarily disappeared only to return after the oil crisis of the 1970's; this was a shortage in its international balance of payments and the resultant need for the government to manage this most implacable of ceilings in a country with extremely few natural resources. As early as the 1880's, Tiedemann writes that in order to keep foreign payments in balance with customs receipts, "all agencies were required to prepare a foreign exchange budget as well as their normal yen budget."[53] Such a foreign exchange budget came into being again in 1937 and lasted in one form or another until 1964, when trade liberalization was carried out. In the era of high-speed growth, control of the foreign exchange budget meant control of the entire economy. It was MITI that exercised this controlling power, and foreign currency allocations were to become its decisive tool for implementing industrial policy.

The political nature of plan rationality can be highlighted in still other ways. MITI may be an economic bureaucracy, but it is not a bureaucracy of economists. Until the 1970's there were only two Ph.D.'s in economics among the higher career officials of the ministry; the rest had undergraduate degrees in economics or, much more commonly, in public and administrative law. Not until Ueno Koshichi* became vice-minister in June 1957 was modern economic theory even introduced into the ministry's planning processes (Ueno studied economics during a long convalescence from tuberculosis before assuming the vice-ministership). Amaya Naohiro reflects this orientation of the ministry when he contrasts the views of the scholar and of the practitioner and notes that many things that are illogical to the theorist are vital to the practitioner—for instance, the reality of nationalism as an active element in economic affairs. Amaya calls for a "science of the Japanese economy," as distinct from "economics generally," and pleads that some things, perhaps not physics but certainly economics, have national grammars. [54] One further difference between the market-rational state and the plan-rational state is thus that economists dominate economic policy-making in the former while nationalistic political officials dominate it in the latter.

Within the developmental state there is contention for power among many bureaucratic centers, including finance, economic planning, foreign affairs, and so forth. However, the center that exerts the greatest *positive* influence is the one that creates and executes industrial policy. MITI's dominance in this area has led one Japanese commentator to characterize it as the "pilot agency," and a journalist of the *Asahi* who has often been highly critical of MITI nonetheless concedes that MITI is "without doubt the greatest concentration of brain power in Japan."[55] MITI's jurisdiction ranges from the control of bicycle racing to the setting of electric power rates, but its true defining power is its control of industrial policy (*sangyo* seisaku*). Although the making and executing of industrial policy is what the developmental state does, industrial policy itself—what it is and how it is done—remains highly controversial.

Industrial policy, according to Robert Ozaki, "is an indigenous Japanese term not to be found in the lexicon of Western economic terminology. A reading through the literature suggests a definition, however: it refers to a complex of those policies concerning protection of domestic industries, development of strategic industries, and adjustment of the economic structure in response to or in anticipation of internal and external changes which are formulated and pursued by MITI in the cause of the national interest, as the term 'national interest' is understood by MITI officials."[56] Although this definition is somewhat circular—industrial policy is what MITI says it is—Ozaki makes one important point clear: industrial policy is a reflection of economic nationalism, with nationalism understood to mean giving priority to the interests of one's own nation but not necessarily involving protectionism, trade controls, or economic warfare. Nationalism *may* mean those things, but it is equally possible that free trade will be in the national economic interest during particular periods, as was true of Japan during the 1970's. Industrial policy is, however, a recognition that the global economic system is *never* to be understood in terms of the free competitive model: labor never moves freely between countries, and technology is only slightly more free.

There are two basic components to industrial policy, corresponding to the micro and macro aspects of the economy: the first the Japanese call "industrial rationalization policy" (*sangyo * gorika* seisaku*), and the second, "industrial structure policy" (*sangyo kozo* seisaku*). The first has a long history in Japan, starting from the late 1920's, when it was quite imperfectly understood, as we shall see later in this book. MITI's *Industrial Rationalization Whitepaper* (1957) says that industrial rationalization subsumes a theory of economic development in which Japan's "international backwardness" is recognized and in which "contradictions" in the areas of technology, facilities, management, industrial location, and industrial organization are confronted and resolved.

Concretely, according to the *Whitepaper*, industrial rationalization means: (1) the rationalization of enterprises, that is, the adoption of new techniques of production, investment in new equipment and facilities, quality control, cost reduction, adoption of new management techniques, and the perfection of managerial control; (2) the rationalization of the environment of enterprises, including land and water transportation and industrial location; (3) the rationalization of whole industries, meaning the creation of a framework for all enterprises in an industry in which each can compete fairly or in which they can cooperate in a cartellike arrangement of mutual assistance; and (4) the rationalization of the industrial structure itself in order to meet international competitive standards.[57] (The last element of the definition was included before the concept of "industrial structure" had been invented by MITI. After about 1960 it was no longer included in the concept of industrial rationalization.)

The short definition is that industrial rationalization means state policy at the micro level, state intrusion into the detailed operations of individual enterprises with measures intended to improve those operations (or, on occasion, to abolish the enterprise). Nawa Taro* says that in its simplest terms industrial rationalization is the attempt by the state to discover what it is individual enterprises are already doing to produce the greatest benefits for the least cost, and then, in the interest of the nation as a whole, to cause all the enterprises of an industry to adopt these preferred procedures and techniques.[58]

Industrial rationalization in one form or another is an old and familiar movement going back to Frederick W. Taylor's system of "scientific management" of the progressive era in the United States (1890–1920); it exists or has appeared in every industrialized country, although it probably lasted longer and was carried further in Japan than in any other country. [59] Industrial structure policy, on the other hand, is more radical and more controversial. It concerns the proportions of agriculture, mining, manufacturing, and services in the nation's total production; and within manufacturing it concerns the percentages of light and heavy and of labor-intensive and knowledge-intensive industries. The application of the policy comes in the government's attempts to change these proportions in ways it deems advantageous to the nation. Industrial structure policy is based on such standards as income elasticity of demand, comparative costs of production, labor absorptive power, environmental concerns, investment effects on related industries, and export prospects. The heart of the policy is the selection of the strategic industries to be developed or converted to other lines of work.

Robert Gilpin offers a theoretical defense of industrial structure policy in terms of a posited common structural rigidity of the corporate form of organization:

> The propensity of corporations is to invest in particular industrial sectors or product lines even though these areas may be declining. That is to say, the sectors are declining as theaters of innovation; they are no longer the leading sectors of industrial society. In response to rising foreign competition and relative decline, the tendency of corporations is to seek protection of their home market or new markets abroad for old products. Behind this structural rigidity is the fact that for any firm, its experience, existing real assets, and know-how dictate a relatively limited range of investment opportunities. Its instinctive reaction, therefore, is to protect what it has. As a result, there may be no powerful interests in the economy favoring a major shift of energy and resources into new industries and economic activities.[60]

Whether this is true or not, MITI certainly thinks it is true and considers that one of its primary duties is precisely the creation of those powerful interests in the economy that favor shifts of energy and resources into new industries and economic activities. Like Gilpin, MITI is convinced that market forces alone will never produce the desired shifts, and despite its undoubted commitment in the postwar era to free enterprise, private ownership of property, and the market, it has never been reticent about saying so publicly (sometimes much too publicly for its own good).

Although some may question whether industrial policy should exist at all in an open capitalist system, the real controversy surrounding it concerns not whether it should exist but how it is applied. This book is in part devoted to studying the controversy over means that has gone on in Japan since industrial policy first appeared on the scene. The tools of implementation themselves are quite familiar. In Japan during high-speed growth they included, on the protective side, discriminatory tariffs, preferential commodity taxes on national products, import restrictions based on foreign currency allocations, and foreign currency controls. On the developmental (or what the Japanese call the "nurturing") side, they included the supply of low-interest funds to targeted industries through governmental financial organs, subsidies, special amortization benefits, exclusion from import duties of designated critical equipment, licensing of imported foreign technology, providing industrial parks and transportation facilities for private businesses through public investments, and "administrative guidance" by MITI (this last and most famous of MITI's powers will be analyzed in Chapter 7). [61] These tools can be further categorized in terms of the types and forms of the government's authoritative intervention powers (its *kyoninkaken*, or licensing and approval authority) and in terms of its various indirect means of guidance—for example, its "coordination of plant and equipment investment" for each strategic industry, a critically important form of administrative guidance.

The particular mix of tools changes from one era to the next because of changes in what the economy needs and because of shifts in MITI's power position in the government. The truly controversial aspect of these mixes of tools—one that greatly influences their effectiveness—is the nature of the relationship between the government and the private sector. In one sense the history of MITI is the history of its search for (or of its being compelled to accept) what Assar Lindbeck has called "market-conforming methods of intervention."[62] MITI's record of success in finding such methods—from the founding of the Ministry of Commerce and Industry (MCI) in 1925 to the mid-1970's—is distinctly checkered, and everyone in Japan even remotely connected with the economy knows about this and worries about MITI's going too far. MITI took a long time to find a government-business relationship that both enabled the government to achieve genuine industrial policy and also preserved competition and private enterprise in the business world. However, from approximately 1935 to 1955 the hard hand of state control rested heavily on the Japanese economy. The fact that MITI refers to this period as its "golden era" is understandable, if deeply imprudent.

Takashima Setsuo, writing as deputy director of MITI's Enterprises Bureau, the old control center of industrial policy, argues that there are three basic ways to implement industrial policy: bureaucratic control (*kanryo * tosei**), civilian self-coordination (*jishu chosei**), and administration through inducement (*yudo* gyosei**).[63] Between 1925 and 1975 Japan tried all three, with spectacularly varied results. However, at no time did the Japanese cease arguing about which was preferable or about the proper mix of the three needed for particular national situations or particular industries. The history of this debate and its consequences for policy-making is the history of MITI, and tracing its course should give pause to those who think that Japanese industrial policy might be easily installed in a different society.

What difference does industrial policy make? This, too, is part of the controversy surrounding MITI. Ueno Hiroya acknowledges that it is very difficult to do cost-benefit analyses of the effects of industrial policy, not least because some of the unintended effects may include bureaucratic red tape, oligopoly, a politically dangerous blurring of what is public and what is private, and corruption.[64] Professional quantitative economists seem to avoid the concept on grounds that they do not need it to explain economic events. For example, Ohkawa and Rosovsky cite as one of their "behavioral assumptions . . . based on standard economic theory and observed history . . . that the private investment decision is mainly determined by profit expectations, based among other things on the experience of the recent past as affected by the capital-output ratio and labor-cost conditions."[65]

I cannot prove that a particular Japanese industry would not or could not have grown and developed at all without the government's industrial policy (although I can easily think of the likely candidates for this category). What I believe can be shown are the differences between the course of development of a particular industry without governmental policies (its imaginary or "policy-off" trajectory) and its course of development with the aid of governmental policies (its real or "policy-on" trajectory). It is possible to calculate quantitatively, if only retrospectively, how, for example, foreign currency quotas and controlled trade suppress potential domestic demand to the level of the supply capacity of an infant domestic industry; how high tariffs suppress the price competitiveness of a foreign industry to the level of a domestic industry; how low purchasing power of consumers is raised through targeted tax measures and consumer-credit schemes, thereby allowing them to buy the products of new industries; how an industry borrows capital in excess of its borrowing capacity from governmental and government-guaranteed banks in order to expand production and bring down unit costs; how efficiency is raised through the accelerated depreciation of specified new machinery investments;

and how tax incentives for exports function to enlarge external markets at the point of domestic sales saturation. Kodama Fumio has calculated mathematically the gaps between the real trajectory and the policy-off trajectory of the Japanese automobile industry during its infant, growing, and stable phases (the data are of course not yet available for a future declining phase). [66] His measures are also tools for analyzing the appropriateness and effectiveness of the various governmental policies for the automobile industry during these phases.

The controversy over industrial policy will not soon end, nor is it my intention to resolve it here. The important point is that virtually all Japanese analysts, including those deeply hostile to MITI, believe that the government was the inspiration and the cause of the movement to heavy and chemical industries that took place during the 1950's, regardless of how one measures the costs and benefits of this movement. A measurement of what MITI believes and others consider to be its main achievement is provided by Ohkawa and Rosovsky: "In the first half of the 1950s, approximately 30 percent of exports still consisted of fibres and textiles, and another 20 percent was classified as sundries. Only 14 percent was in the category of machinery. By the first half of the 1960s, after the great investment spurt, major changes in composition had taken place. Fibres and textiles were down to 8 percent and sundries to 14 percent, and machinery with 39 percent had assumed its position of leading component, followed by metals and metal products (26 percent)."[67]

This shift of "industrial structure" was the operative mechanism of the economic miracle. Did the government in general, or MITI in particular, cause it to occur? Or, to put it more carefully, did they accelerate it and give it the direction it took? Perhaps the best answer currently available is Boltho's comparative appraisal: "Three of the countries with which Japan can most profitably be compared (France, Germany, and Italy) shared some or all of Japan's initial advantages—e.g., flexible labor supplies, a very favorable (in fact even more favorable) international environment, the possibility of rebuilding an industrial structure using the most advanced techniques. Yet other conditions were very dissimilar. The most crucial difference was perhaps in the field of economic policies. Japan's government exercised a much greater degree of both intervention and protection than did any of its Western European counterparts; and this brings Japan closer to the experience of another set of countries—the centrally planned economies."[68]

If a prima facie case exists that MITI's role in the economic miracle was significant and is in need of detailed study, then the question still remains why this book adopts the particular time frame of 1925–75. Why look at the prewar and wartime eras when the miracle occurred only in postwar Japan? There are several reasons. First, although industrial policy and MITI's "national system" for administering it are the subjects of primary interest in this study, the leaders of MITI and other Japanese realized only very late in the game that what they were doing added up to an implicit theory of the developmental state. That is to say, MITI produced no theory or model of industrial policy until the 1960's at the earliest, and not until the creation of the Industrial Structure Council (Sangyo * Kozo* Shingikai) in 1964 was analytical work on industrial policy begun on a sustained basis. All participants are agreed on this. Amaya quotes Hegel about the owl of Minerva spreading her wings at dusk. He also thinks that maybe it would have been just as well if the owl had never awakened at all, for he concludes with hindsight that the fatal flaw of MITI's prized but doomed Special Measures Law for the Promotion of Designated Industries of 1962–63 (a major topic of Chapter 7) was that it made explicit what had long been accepted as implicit in MITI's industrial policy.[69]

As late as 1973 MITI was writing that Japan's industrial policy just grew, and that only during the 1970's did the government finally try to rationalize and systematize it.[70] Therefore, an individual interested in the Japanese system has no set of theoretical works, no locus classicus such as Adam Smith or V. I. Lenin, with which to start. This lack of theorizing has meant that historical research is necessary in order to understand how MITI and industrial policy "just grew." Certain things about MITI are indisputable: no one ever planned the ministry's course from its creation as the Ministry of Commerce and Industry (MCI) in 1925, to its transformation into the Ministry of Munitions (MM) in 1943, to its reemergence as the MCI in 1945, down to its reorganization as MITI in 1949. Many of MITI's most vital powers, including their concentration in one ministry and the ministry's broad jurisdiction, are all unintended consequences of fierce intergovernmental bureaucratic struggles in which MITI sometimes "won" by losing. This history is well known to ministerial insiders—it constitutes part of their tradition and is a source of their high esprit de corps— but it is not well known to the Japanese public and is virtually unknown to foreigners.

Another reason for going back into history is that all the insiders cite the prewar and wartime eras as the time when they learned *how* industrial policy worked. As will become clear in subsequent chapters, there is direct continuity between prewar and postwar officials in this particular branch of the Japanese state bureaucracy; the postwar purge touched it hardly at all. The last vice-minister during the period of this study, Komatsu Yugoro *, who held the office from November 1974 to July 1976, entered the ministry in the class of 1944. All postwar vice-ministers previous to him came from earlier classes, going back to the first postwar vice-minister, Shiina Etsusaburo* of the class of 1923. Wada Toshinobu, who became vice-minister in 1976, was the first without any experience of the Ministry of Munitions era.

Nakamura Takafusa locates the "roots" of both industrial policy and administrative guidance in the controlled economy of the 1930's, and he calls MITI the "reincarnation" of the wartime MCI and MM.[71] Arisawa Hiromi says that the prosperity of the 1970's was a product of the "control era," and no less a figure than Shiina Etsusaburo, former vice-minister, twice MITI minister, and vice-president of the Liberal Democratic Party, credits the experiences of old trade-and-industry bureaucrats in Manchuria in the 1930's, his own and Kishi Nobusuke's included.[72] Tanaka Shin'ichi—who was one of the leading officials of the Cabinet Planning Board (Kikaku-in) before it was merged with MCI to form the MM, and who became a postwar MITI official—argues that wartime planning was the basis for the work of the postwar Economic Stabilization Board (Keizai Antei Honbu) and MCI.[73] And Maeda Yasuyuki, one of Japan's leading scholars of MITI, writes that "the heritage of the wartime economy is that it was the first attempt at heavy and chemical industrialization; more important, the war provided the 'how' for the 'what' in the sense of innumerable 'policy tools' and accumulated 'know-how.'"[74]

Even more arresting than these comments from participants and analysts is the fact that the Japanese economy began to change in quite decisive ways around 1930. It is true that industrial policy in one form or another goes back to the Meiji era, but it is also true that after the turn of the century the government moved progressively away from its former policies of interference in the domestic economy (if not in those of the colonies or dependencies), and that for about thirty years an approximation of laissez faire was in vogue. Rodney Clark's observation is startling but true: "The organization of Japanese and Western industry was probably more similar in 1910 than in 1970."[75]

MITI and modern Japanese industrial policy are genuine children of the Showa* era (1926-), and the present study is for that reason virtually coterminous with the reign of Emperor Hirohito. To carry the story back any further is to lose focus on the postwar economic miracle, but to fail to incorporate the history of the prewar MCI is to ignore MITI's traditions and collective consciousness. MITI men learned their trade in MCI, MM, and the Economic Stabilization Board. These were once such fearsome agencies that it was said the mere mention of their names would stop a child from crying. Admirers of the Japanese miracle such as I have a duty to show how the disastrous national experiences of the 1940's gave birth to the achievements of the 1950's and 1960's.