The Political Economy of Japan

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Japan's economy is one of the success stories of the post-World War II era. Literally rising from the ashes of wartime destruction and neglect, the Japanese economy is today the second strongest economy in the world. Given this success, the role of the Japanese government in economic growth and the nature of state-society relationships in economic policymaking is a subject of considerable interest. It is also a subject of much controversy. Japan is often seen as the world's most successful example of government directed economic development (1). Admirers of Japan's success look to her "market-following" government strategies and alleged strong government-business cooperation as a solution to productivity and competitiveness lags in other countries (2). Elsewhere, critics of Japanese policy assert that these same tendencies are a threat to the survival of the world's other leading economies (3). Both of these groups believe that the Japanese government had a strong, directive role in that country's economy.

Some Japan specialists attribute a different, less dominant role in economic affairs to the Japanese state. These persons see Japanese economic policy as an arena of government-private sector negotiation and some view government inputs as secondary in importance to private sector behavior as a driver of the economy (4). For example, many economist feel that the government's main contribution to Japan's economic dynamism was encouragement of high savings and investment, and that Japan's economy is motivated mainly by private sector competition like that in other advanced countries (5).

Obviously there are many views of Japanese economic development. All observers agree that Japan's economy has come far since World War II's end, even while differing on the causes and significance of the government's role in this growth. The differences in interpretation reflect different initial assumptions and different research concerns in an area of considerable complexity. Studies which assert a strong government role normally haven't examined policymaking and policy implementation processes and ignore the inputs of private interests for this reason. Some studies which downgrade the government role reflect normative preferences for free competition.

In this chapter, I will review different explanations of Japanese economic growth and attempt a synthesis of different views. I will also examine the implications of a general model of Japanese politics -conflict amidst cooperation and structure- for patterns in political economic behavior. We anticipate that we will reject the simple, bureaucratic dominance model of Japanese economic policy. It is likely that Japan's economic policymaking will often be pluralistic despite periodic efforts to structure relationships and make competition orderly and that economic policies will be the result of negotiation between public and private sector actors. Reflecting the importance of inter-actor negotiations, policies will include elements of both ministry ideology and private firm concerns for profits and market shares. Despite strong and

redundant personal and institutional ties between private interests and state ministries, and frequent inter-actor consultation, there will also be frequent disagreements in these privileged channels. Finally, many policy decisions will be politicized and public policies serving political clients may be quantitatively as important as incentives for developing industries (6).

Japan's Economic Miracle: The Record. Japan's economic performance since World War II is one of the truly dramatic trends in recent world economic history. Starting with an economy drastically disrupted by World War II and more dependent on foreign raw-material sources than that of any other major power, Japan in some years registered the highest annual growth rates ever experienced in the development of the world's major economies.

The record is just as impressive from the perspective of Japanese history. Japan made major strides in economic growth before World War II. In 1939 Japan was the most advanced industrialized nation outside of Western Europe and North America, but still had some characteristics -among them, extensive rural poverty and strong light industries exports- found in some "third world" economies today. Six years later and devastated by war, Japan's economic potential was reduced to less than one third of its former capacity. Yet by the 1950s Japan had recovered prewar production levels and by 1990 economic output in constant prices was over six times that of 1960; nominal GDP increased 24 times in this same period. The performance of the economy in industrial sectors such as iron and steel, automobiles, machinery and electronics was especially strong.

Trends in the gross national product provide a good beginning point to measure Japan's postwar economic success. In 1955 (roughly the beginning of the high growth period) Japan's nominal GNP was $24 billion. By 1978 the GNP figure had reached $963 billion and by 1991 Japan's GNP was assessed at $3.4 trillion (Table 1)(7). As part of this pattern, Japan experienced very high growth rates in some individual years. The peak years in this trend were 1960, 1961 and 1964, when 13-14 percent real growth was observed. Growth in 1968-1969 was almost as rapid. These figures were dramatically higher than growth rates in other economies up until that time (8).

When the Japanese figures are compared on a per-capita basis with those from other industrialized countries, Japan's economic success can be seen even more clearly (Table 1). In 1952, Japan's per-capita GNP was $188, roughly one-twelfth that of the United States and one-half that of West Germany. By 1960, Japanese per-capita GDP had grown to $458, while by the mid-1970s it was well over $4,000 and nearly 60 percent of American and German levels. By 1980, reflecting changes in currency values as well as continued growth in most years, the Japanese figure soared even closer to the levels registered in the United States and

West Germany. By 1990 both Japan and Germany had passed the United States. Per-capita nominal GDP in Japan had increased 31 times from 1952 to 1990(9). In slightly over one century Japan was transformed from being a predominantly poor, agricultural country to be one of the world's most successful economies.

Postwar growth in production in specific industries provides a further graphic testimony of Japan's success. Increases in steel production are an excellent indicator of postwar industrial growth. Japan was already unique in the non-Western world before World War II by virtue of its then high levels of steel production relative to other countries outside of Europe and North America. In 1896 Japanese steel output was only an estimated 100 tons, but by 1936 steel production had reached 3.6 million tons. By 1960, in the middle of the high growth period, the figure for Japan had grown to a much greater 22 million tons and in 1973, Japan reached its peak postwar steel output of 119 million tons (10). Since then Japan has ranked second in the world in crude steel output behind the USSR.

Gross production and crude steel figures are good indicators of Japan's overall postwar economic performance. GDP and GNP estimates indicate the general shape of economic growth, and crude steel is one of the most basic of industrial commodities because of its use in many other manufactured products. Still, these general performance figures do not tell the whole story. Quite a bit of Japan's postwar success has been due to growth and enormous export sales of specific industries. In the 1950s and early 1960s these industries included shipbuilding and steel. Later, the automobile, electronics and machine tool industries replaced these products as export leaders.

The automobile industry is a striking example of Japanese growth and related export success. In the early postwar era, Japan's automobile production was very small, actually minuscule in comparison with the United States and Europe. In 1960, for example, Japan produced only 165 thousand automobiles and 308 thousand trucks. By 1970, however, automobile production alone had increased to over 3 million units, and by 1990, the figure was nearly 10 million units, a sixty-two-fold increase in production over a twenty eight year period. By 1980 Japanese passenger car production exceeded that of the United States, the world leader up until then (11). In recent years roughly half of the automobiles produced in Japan were exported, with a large share of these exports going to North America.

Production data for several other modern manufactures indicate similarly successful trajectories, as do also figures for Japan's foreign trade. As is well known, Japan is currently the world's largest exporter of automobiles and consumer electronics, as well as a major exporter of many other industrial commodities.

Japan's economic miracle was all the more impressive in view of that

country's traditional dependence on foreign imports of many of the raw materials needed for industrial production. Currently Japan imports nearly all of its energy needs; imported crude oil contributes 99.5% of Japan's requirements, while the figure for coal is 92%. Other minerals are also scarce in Japan: the dependency ratio for iron ore is 100%, while that for copper –the only metal of importance mined in Japan- is 98.9%. Over half of Japan's food needs are also met by imports, with feed grains, corn, wheat and soybeans leading the way (12).

Japanese Governments Economic Plans. Japan's economy was severely weakened during World War II: plants and facilities were damaged or destroyed, and work was disrupted by mobilization and flight from the cities. Many of the initial policies of Japanese government after the end of the war were concerned with repair of physical facilities and the more complex task of reviving an economy whose basic institutions were disrupted and disorganized. In the early postwar era Japan also suffered from loss of former sources of critical raw materials. In contrast with the immediate postwar years, the decades of the 1950s and 1960s were generally a period of consolidation and growth. Throughout the 1950s and most of the 1960s, the Japanese government was supportive of economic growth, at times at the expense of alternative policy choices.

From the 1950s on, the Japanese government endeavored to promote economic growth through various macro-economic policies and by sectoral programs aimed at development of specific industries. An alternative policy commitment to a major rearmament was essentially rejected after an intense debate. Specific government economic tools, including government bank loans, tax incentives and trade protection, were developed and deployed to foster modernization and growth.

Indicative economic planning began in Japan in the 1950s (13). Five major plans were developed and promulgated by the Economic Planning Agency between 1955 and 1967 (Figure 1), and other plans have followed over time. Indicative plans set economic goals and do not provide sanctions for non-compliance. Like their French counterparts, the Japanese plans served as broad outlines for guidance of public and private economic activity rather than as compulsory programs. Japan's plans were essentially large-scale development forecasts buttressed by elaborate statistical references and supplemented by programs for growth in specific sectors in quite a few cases. The plan documents contained specific target figures for everything from farm crops to the output from specific major industries. The plans also contained sections on infrastructure, public works and social programs needs. Each of the plans had a special focus and target slogans, such as catching up with Britain (1953-1957) or the doubling of incomes (1960-1967). As time went on and the economy prospered, and new needs in environment protection or social security became obvious, the concerns addressed by the plans shifted more to non-economic goals in the quality of life and welfare areas. The planning process continues even

today although the plans are given much less public attention than in the early postwar era.

Industry "rationalization" and development policies and government foreign trade policies supplemented the general economic plans in the effort to promote economic growth and shape its directions in specific industries. The Ministries of International Trade and Industry and Transportation orchestrated a wide range of supports to encourage development and competitive viability in international markets. Most of the laws and plans developed as part of these programs were very general and can best be seen as policy frameworks. General goals were indicated by these frameworks. More specific programs and policy tools were developed and deployed under the "umbrella" provided by the framework laws and policies. As can be seen from the examples in Figure 1 the emphases on different industries changed over time. The 1950s programs addressed infra-structure needs and heavy industries, namely power, coal, shipping, steel and petrochemicals (especially fertilizer). Later interest shifted more to automobiles, machine tools and electronics.

Specific policy tools such as government bank loans, accelerated tax depreciation allowances for equipment purchases, special tax reserve funds for export market development, and tax deductions for income earned overseas were designed to foster growth and promote exports in particular areas following the general directions indicated in the "framework" documents. MITI control over raw materials and technology import licenses permitted allocation of critical materials and processes to industries slated for development, especially in the 1950s and early 1960s. In the 1960s, inter-firm mergers were also encouraged on the assumption that concentration would lead to greater international competitive power. Other policy instruments included protective tariffs and import quotas and the sanctioning of inter-firm cartels. Information in Figure 2 shows the cluster of policy tools developed to support the computer and "information" industry under specific framework legislation and serves as an example of the multi-faceted government efforts.

Macro-Economic Policy and Japan's Fiscal Investment and Loan Program. Japan's macro-economic policies generally supported the government's commitment to growth in the 1950s and 1960s. Monetary policy sought to maintain economic stability and to reduce pressure on currency reserves when internal demand led to increased imports. On some occasions industrial targeting plans were held back in deference to counter-cyclical monetary policies.

One of the most important contributions by the Japanese government to the support of economic development during this period was its commitment to fiscal restraint. Japan in the 1960s had the lowest level of taxation of any major industrial power. In 1965 total taxation in Japan (excluding social security contributions) amounted to 18 percent of gross domestic product, in contrast with 27-35 percent for

the United States, Britain, Germany and France. Public expenditures from the annual budgets in Japan also carried out a theme of limited government. In the 1950s and 1960s government outlays on current account represented only 13-14 percent of gross domestic product in Japan, whereas in other industrialized countries they ranged as high as 30 percent. Constrained government expenditures were one way to facilitate savings and investment. Less was extracted from national income and allocated to public expenditures in Japan than in other industrialized nations (Table 2), which permitted allocations of funds to other purposes.

A major reason for the comparative differences in government expenditures were lower Japanese outlays on social programs and defense. After an intense debate in the early 1950s over defense outlays vs. economic development, Japan's government decided to place growth at the top of its agenda. A restricted defense-force concept was developed at this time with the result that subsequent defense outlays hovered around 1 percent of the national income in much of the postwar era (14). In contrast, United States spent around 6 percent of its GDP on defense in most years while other countries in the NATO alliance normally spent between 3 and 6 percent on their military efforts (15). In the mid-1960s Japan also spent a little less on social welfare outlays than the United States and roughly one third of the amounts committed to social programs by European countries. The picture is much the same today, with the exception that Japanese expenditures on social security are much higher because of policy changes in the 1970s and the maturing of the pension system. Japan’s government pension and health care programs are now as comprehensive as those in some Western European countries. Expenditures will continue to grow in this area as time passes (16).

In addition to a constrained fiscal policy, the Japanese government encouraged investment by maintaining low interest rates in some periods (17). The OECD estimated by the late 1960s that gross fixed investment in Japan averaged 38 percent of gross domestic product each year; the comparable figures for other major industrialized countries ranged between 16 percent for the United States and 26 percent for France (18). In addition to whatever effects ensued from government policy, investment was facilitated by high postwar individual and corporate savings rates relative to other countries. An individual disposition to save was itself further encouraged by tax exemptions for small savings deposits, including those made through the vast postal savings system (19). Even after a shift toward greater consumption Japanese savings levels are today still slightly higher than those in Germany and France and twice those of the United States (20).

Personal savings deposited in Japan's postal savings system are funneled into capital investments by the government-run Fiscal Investment and Loan Program (FILP), an unusual but also highly significant institution. The FILP also drew funds from social security deposits. The FILP has ranged in size between 27 and 55

percent of the Japanese government budget in different periods. Since most of the FILP's funds come from non-tax sources, the FILP cannot strictly be compared with the budget even though some of its uses of funds are comparable to budget expenditures elsewhere.

Even though budgets were themselves constrained in Japan compared with other industrialized countries, the existence of the FILP is very important. The FILP programs make the Japanese government role more significant than is indicated by budget information alone. The FILP has invested in fields such as roads, railways, ports, housing, and other social and industrial infrastructure projects as well as supporting direct loans to industries via institutions such as the Japan Development Bank. In 1955 through 1962 between 11 and 21 percent of the FILP's funds were designated for basic industrial development. Since that time the FILP's direct role in funding industrial growth has steadily decreased. Currently only 2,5 percent of the FILP's substantial funds go to direct support of large scale industry (see also Table 6). FILP's role in financing medium and small business and infrastructure development has grown substantially through programs which contribute to overall economic growth in different channels from high-profile industries. These programs are discussed further below.

Evaluations of the Government's Role. The combination of rapid economic growth, sharp production gains in important industries and export successes with extensive macro- and micro-economic planning has suggested to many persons that the Japanese state played a large role in economic development. Japan has been seen as a uniquely successful example among major economies of government stimulus of private sector firms to modernize production processes because of the coincidence between policy and dynamic growth. This view and perceptions that the Japanese market is closed has led U.S. and EEC politicians to accuse Japan of engaging in economic practices which "tilted the playing field". In contrast, quite a few academic studies of Japanese economic policies and their impact present a more qualified view of the state's role in the economy than the opinions just cited. The authors of these accounts see state-economy linkages as complex and government actions as having mixed effects (Figure 3).

One of the best known characterizations of Japanese government economic policy from the dominant state viewpoint is the work of Chalmers Johnson. In his pioneering study of MITI, Japan is seen as a "developmental state" having special priorities and influence. In Johnson's words (21):

> "The priorities of the Japanese state derive first and foremost from an assessment of Japan's situational imperatives…These...include late development, a lack of natural resources, a large population, a need to trade and the constraints of the international balance of payments.... Nurturing the economy has been a major priority of the Japanese state because any other

course of action implied dependency, poverty and the possible breakdown of the social system.

A state (mainly MITI) developmental "ideology" is seen by Johnson as the major driving force in industrial plans. By imposing their own version of economic rationality, or by basing economic policies on a synthesis of government technocratic formulae and market information, the Japanese government ministries are said to have been capable of successfully guiding economic growth. Johnson's view has become the mainstay of popular knowledge about the Japanese government's economic role, both among admirers and critics of Japanese policy(22).

Some economists take a radically different view of the Japanese government's importance to economic growth. For example, Hugh Patrick and Henry Rosovsky have written that the state's role as less important than private sector initiatives and that Japan is much like European mixed economies as the result(32). Several investigators also state views of Japan's governmental role which lie somewhere between the two extremes represented by Johnson's strong interventionist state and a view of the state as using mainly conventional fiscal and monetary tools to stimulate the economy. Their interpretations of Japanese government economic policy emphasize that (a) most important economic decisions are politicized, (b) policy inputs by interest groups and firms are often more influential than those of the government and (c) industry interests and government rationales aren't always complementary. The ends of state policy are also seen as being subverted by firms, behavior or unanticipated market trends. Among this group Richard Samuels is the leading proponent of a view that political influence from firms and industrial associations influences Policymaking. Samuels also holds that there are many departures from government ministry intentions in the policies which emerge from government-interest group negotiations. Samuels is joined by David Friedman in the assertion that there are often unanticipated aspects of policy implementation (24).

Interpretations of Japanese government economic policy roles form a rough continuum which includes two closely related dimensions. The first dimension is the degree to which the state dominates economic policymaking and implementation. The second is the character of the rationales employed in economic policymaking. At one pole, experts see a dominant state which orchestrates economic progress following its own growth ideology (25). At the other extreme, the state's role is constrained. Occupying the middle of the continuum are views that economic policy is a negotiated blend of ministry economic ideology and private interests; policymaking participation is pluralistic.

In our own view, both poles of the continuum of interpretations of the Japanese government economic role are unsatisfactory. Johnson's rich history of

MCI and MITI policy development asserts that the state role is dominant without examining policymaking processes in detail. On the other hand, interpretations by economists often undervalue the enormous volume of government policymaking, which established some kind of parameters for economic behavior whatever their mix of inputs. Because of his deep concern for the details of actual policy processes, Richard Samuels' study of energy policy from the Meiji era to the present provides the most instructive available model as to both the nature of participation and also the rationales in Japanese industrial policymaking. His pioneering contributions are supplemented by fragmentary evidence from other sources (see Figures 4 and 5 notes).

According to Samuels' study, economic policymaking is normally highly pluralistic. Policy choices are decided on the basis of negotiations within and between coalitions of industry associations, individual firms, advisory councils, ministries and political parties. Most of Samuels' cases thus fit the concept of "state pluralism" developed in earlier chapters. State pluralism, it will be remembered, is policymaking where government ministries participate as a proponent of some kind of policy and conflict takes place between state and private sector actors. Under state pluralism the final decision is more than simply the result of the interactions within a parallelogram of power involving mainly private interest groups, the traditional paradigm for pluralism. In Japan the parallelogram often includes a state ministry as an active coalition participant in opposition to a coalition including other government offices.

Three different types of state pluralism can be seen in various economic policymaking processes (Figure 4). In one form of state interaction with private groups, two mutually opposing coalitions containing ministries, private sector groups, business firms and political party politicians debate a policy and negotiate their differences. Such a bi-polar confrontation took place in a late 1940s debate over a "priority production plan" for coal and several later energy industry policies (26). A second type of state pluralism can be seen where important private interests are all aligned (although not always mutually agreed) against a government ministry. This policy scenario could be seen in the formulation of plans to "rationalize" the coal industry in 1955 (27). In still a third example, and one more akin to traditional pluralist concepts, a government ministry arbitrated agreements between private sector actors (28).

The presence of several different varieties of state pluralism once again affirms the dynamism of government-interest group pluralism, as did the shifting coalitions discussed earlier in connection with 1980s policy processes. Moreover, the state pluralism we have observed in postwar policymaking isn't unique or new. Samuels' study documents similar examples as far back as the Meiji period (29). Although other scholars have not documented the intricacies of policy processes to

the degree displayed in Samuels' work, there are still quite a few examples of firm independence and therefore of pluralistic processes in other realms. Figure 4 contains relevant examples of state pluralism drawn from Samuels' and other works.

Recent scholarship on Japan's political economy also demonstrates that multiple rationales guide policy debates. Policies are not based solely on a single simple formula for economic growth employed by state ministries to support winners. Instead, both ministries and private interests approach economic policy choices with multiple goals in regard to any issue as well as having a variety of concerns at different times. Political parties, local government and trade unions also have multiple concerns which reflect their own goals and operating rationales.

As Figure 5 illustrates, individual economic policies address in every instance combinations of multiple rationales. On the government ministry side, some policies were designed mainly to increase production, others to stimulate productivity, others to provide a stable domestic supply so as to conserve foreign exchange and others to relieve burdens on fiscal resources. Specific ministries also proposed economic policy formulae which would expand their own control, usually because of an ideological commitment to state intervention and a mistrust of free markets.

Depending on the issue, business firms' main policy goals have included avoidance of direct government control, profit maximization, survival by avoidance of bankruptcy, and a acquisition of a stable or growing market share. These and other concerns have led businesses to make subsidiary demands for various kinds of actions such as production subsidies, regulations which limit market entry or government-supported price mechanisms. Other political actors have had similarly diverse concerns depending on the time and setting. Trade unions were concerned with continued employment, unemployment benefits, retraining programs, participation in management and/or, in some periods, nationalization of particular industries (30). Local governments themselves wanted to avoid footing the bill for industrial development or adjustments, while maximizing local employment and prosperity. Politicians made demands based on the rationales advocated by their groups or localities. Policies were made in what Norton Long has called an ecology of games (31). Policies are the outcome of a negotiated intersection of various economic rationales, not the imposition of a single dimensional economic growth rationale on a variety of actors with varying and not always mutually consistent (or even simply defined) interests. These complexities indicate there is much more to government policymaking and its acceptance than solely a bureaucratic ideology of growth.

Qualifying the Japanese Government Economic Role: The Scope and Priorities of Government Investments. Before discussing the implications of government programs in specific economic sectors, two general misconceptions

about the nature of Japanese government investments in the economy must be addressed. The first point to remember is that the size of government financial interventions in particular industries, as well as in the economy in general, is often exaggerated. As Edward Lincoln has stated (32):

> "Many of the writings about Japan are very short on numbers, and thereby slip into an exaggeration of this role by failing to understand the relative size of government financing of the private sector."

Chalmers Johnson asserts that the Japanese government provided between one quarter and one third of all industrial capital in the 1950s and a sizable amount of funds in the 1960s (33). Other studies have also cited similarly substantial levels of support and/or large government investments and subsidies stated in Japanese yen which inevitably appear to be much larger amounts than they would if the figures were quoted in dollars (34). Moreover, Japanese government statistical series, indicate a more modest state role in direct investment than that suggested by Johnson or implied elsewhere (35). In Table 3 we calculate the importance of government bank lending relative to commercial bank lending and also the shares of government bank loans for equipment investments compared to commercial bank loans for the same purpose. Specifically, the Japan Development Bank and the Export-Import Bank, the two Japanese government banking institutions which typically lend to big business, contributed between 3 and 8 percent of all industrial loans in the 1950s, and roughly the same amounts in the 1960s. The share of government lending actually peaked in the 1970s at between 9 and 11 percent, a time when recessed industries made heavy claims on government. Relatedly, the Japan Development Bank, the main government "policy" bank supportive of modernization of production facilities, provided industry between 5 and 6% of its equipment investment needs in the 1950s and between 3 and 5 percent thereafter. Although the relative amounts of government lending are not insignificant, government lending was considerably smaller in scale than the earlier information indicated or implied (36).

A second important qualification on the Japanese government's role in the economy concerns the priorities represented by government bank loans to specific industries and the implications of these priorities. Here two kinds of information are relevant, the shares of Japan Development Bank Loans provided to specific industries and the degree to which these industries were dependent on government financing (Table 4). Four industries -shipping, electric power, coal and iron and steel- received the lion's share of government loans in the 1950s. These same industries were also more dependent on government finance than other industries. Other industries generally received very small shares of government loans and were not especially dependent on the JDB as a result.

Rather than guiding growth through sizable investments in all industries

targeted for growth, as is often believed, initial Japanese government lending priorities were a policy response to the needs of the early postwar economy. Industries which provided important inputs or services for other industries, and which needed very large amounts of loans, received the most support and in turn depended the most on government lending. Postwar shipping capacity was limited due to the loss of ships during World War II, and large government loans were provided in the 1950s to replace these losses (37). Electric power received considerable funds from the JDB for development of hydroelectric capacity and to support the continued use of domestic coal in power generation (38) . Coal received a sizable share of government financing in an effort to increase productivity and lower costs so as to compete with imported oil and conserve foreign currency (39). Iron and steel was given funds because of the importance of steel to other industries as well as its potential as an export industry.

The "basic" industries, especially electric power and shipping, unquestionably needed very large amounts of funds in the early postwar era, a time when private banks were unable or in some cases probably reluctant to provide funding on the scale needed. Nevertheless, three of four basic industries continued to receive priority attention in the 1960s even after the early postwar justifications had disappeared to a considerable degree. In the same period, several of the industries targeted by government plans did not receive substantial government loans. Automobiles received only a negligible portion of government bank loans, with a resulting dependency ratio of less than one percent in the period in which it was a "targeted" industry (40). Other machinery industries likewise failed to come near the leading "infra-structure" industries in terms of either shares of JDB lending or levels of dependency on government funds. Machinery industries, which including automobile parts and machine tools, received $285 million while a "targeted" industry in the 1960s and the computer industry was given $39 million in the 1960s when it was targeted as part of electric machine industries (41). In contrast, loans provided shipping, coal and the power industries totalled $3.64 billion between 1951 and 1969. The allegedly superior, technocratically rational Japanese planners could not predict market trends in these instances.

Several factors in addition to a concern for purely economic growth seem involved in the setting of lending priorities. Government lending priorities and industry dependencies on government loans imply that the "developmental state" was a follower as much as a leader. Important policy instruments were as much problem as "target" driven. The figures indicating dependency on government loans are especially relevant here since they indicate where industries actually needed government loans due to lack of available private sector funds. Government lending in the early 1950s responded to the needs of infra-structure industries which required very big investments at a time when capital was in short supply. Dependency on government loans also reflected the size of risk involved in lending very large

amounts at a time when the future of the economy was uncertain. Commercial banks were reluctant to make loans under these conditions. Later, as prosperity progressed and the future looked more certain, industries were able to obtain commercial bank loans more readily (42). Where there was a policy justification for support of particular industries, and amounts of needed funds were huge, the government became a lender of last resort. Once these lending patterns were established, they were hard to change, either because of the large amounts involved in the loans, or, in the case of the coal and shipping industries, because of an increasingly shaky economic situation which enhanced risk and made commercial bank loans both harder to get and more expensive, because of political pressures from the LDP, private enterprise and labor and/or because of social policy concerns vis-a-vis unemployment (43).

The Japanese government's role in industrial lending was not negligible in certain industries. However, government lending was not as massive as was sometimes asserted. Many industries popularly believed to be heavily subsidized by the Japanese state also received surprisingly small amounts of financial help. Lending priorities reflected government responses to a variety of factors including infra-structure needs as well as efforts to stimulate planned growth.

Further Evaluation the Japanese Government's Role in Economic Growth: Industry Impact. The Japanese government's overall impact on economic growth above and beyond its role in lending is itself a subject of controversy. Some specialists point out that plan targets weren't reflected in subsequent economic reality very well. Others cite government support for industries which became losers as well as those which were winners and other unintended consequences. Still other studies point out that economic policy goals other than high growth, such as state programs for recessed industries and economic policies designed to satisfy LDP clients, often outpaced high growth supports as a share of government subsidies.

Some research has discounted the direct effects of planning on economic growth because there was often little fit between planned and actual outputs. Our own comparison of economic plans with GNP figures shows that output was double or more the size of GNP goals in each of the first four economic plan periods (44). Production also deviated from plan goals in specific industries as is documented in the case of the coal industry and machine tools. According to David Friedman, "...Actual results varied wildly from plans. Output in 1960 was Y45 billion, or 225 percent of planned value, whereas output in 1965 was only 52 percent of the plan…." Friedman also points out that targets for machine tool specialization were not met, government loans correlated more with recessions than growth, and government plans for restructuring were not followed. Elsewhere, Richard Samuels has stated that, "Government planners, who had failed completely to anticipate the recovery, projected increasing demand for coal. They were off by 9 million tons" (45). Business firms' response to economic cycles and general demand determined outputs in these

examples, not MITI policy. Under the kinds of circumstances just described some Japanese economists have been loath to grant the plans a determinant role in economic behavior. In the words of Toshimasa Tsuruta (46):

> "...the modernization of the industrial structure, and the strengthening of industrial competitiveness were not the result of industrial policy, but rather of the relatively smooth operation of the price mechanism and the ability of firms through their own decisions to adapt. The initial objectives of industrial policy could not be realized, and they remained empty plans…."

Many commentators on Japanese economic policy have speculated as to the government's ability to pick winners and allocate resources accordingly. Among the industries supported by the Japanese government in the 1950s, iron and steel is normally seen as a successful application of industrial policy (47). A variety of policy tools -loans, tax incentives, protection and coordinated production and sales- were used to stimulate modernization of facilities and stable supply and demand. Iron and steel received $74.5 million in "rationalization" support from 1951-1965. While this was a fairly small amount of money compared with the funds given power, coal and shipping, it was still was considerably more than was given any other industry at this time. The goal of policy was modernization of steelmaking processes so as to improve productivity and lower prices. Lower prices in the steel industry were sought to facilitate growth in domestic manufacturing industries which depended on steel inputs. Lower prices would also lead to more competitive exports. Productivity did increase in the 1950s and steel prices declined until the first oil crisis in 1973 (48).

One of the more interesting facets of Japanese industrial policy is the simple fact that two of Japan's most highly successful industries, consumer electronics and automobiles, were given very little government support relative to infra-structure and later recessed industries. Consumer electronics received only $6 million in government loans during the 1960s, and the government initially opposed technology imports destined for this industry in the 1950s (49). The government role in the automobile industry was mixed. Government lending provided 8 percent of the industry's borrowing needs in 1955, but only between less than 1 percent and 2 percent in most other years (50). Tax incentives, government allocated technology imports and protection have been seen as having a modest positive effect on the industry in the 1950s and 1960s. Still, government policies (especially protectionist barriers) are believed to have played a relatively modest role relative to other economic factors including high world demand, cheap gasoline in the United States and improvement of the Japanese road system (51). Perhaps the most important government supports given Japan's automobile industry were the loans and other incentives provided auto parts producers, since these encouraged cost-saving and quality-invoking technological innovations in medium and small firms which provided inputs for the assembly lines of large firme (52).

Support for the Japanese computer industry is also evaluated as having positive effects on the industry's development by some persons. Nevertheless, the overall evaluation of government computer policy is somewhat mixed like that of industrial policy in general. Early in the development of the computer industry the government allowed IBM to enter the Japanese market in exchange for sharing of technology with Japanese firms (53) . Early support of technology induction was accompanied by establishment in 1969 of a quasi-government firm (JECC) to lease Japanese computers to end users (54). This measure was a direct response to IBM's major instrument of market development for mainframe computers and resulted in a stable, predictable demand for Japanese-made computers. Government procurement of Japanese computers for public offices and universities had a similar effect. Government support for high visibility cooperative government-private sector R and D projects is also seen as having been generally beneficial to the computer industry and its various spinoffs (55). Nevertheless, on the negative side, a government emphasis on hardware development at the expense of promotion of systems design and software innovation has been seen as contributing to Japanese industry lags in these areas.

Some appraisals of industrial policy assert as a general principle that the Japanese government did well in growing industries but poorly in those which were declining. The state of coal and shipping after several years of government priority support seems to support this view. Imported crude oil became cheaper than coal produced in Japan beginning in the late 1950s. Substantial government loans and other incentives were provided the coal industry after that time in efforts to raise productivity to levels which would make coal competitive with oil so as to reduce the pressure of demand for oil imports on foreign currency reserves. The coal programs were also a response to political pressures on the behalf of labor, the mining districts and the mining firms (56). In coal's waning days in the 1960s and 1970s, funds were thus allocated in part as a social policy response to unemployment in coal mining regions.

The long and somewhat tortuous road taken by Japan's postwar shipping and shipbuilding industries was generally a similar story to that for coal. Initial government policies helped Japanese shipping get back on their feet after heavy wartime losses. The belief that Japan should have its own merchant ships was strong on both security and economic grounds. Shipbuilding was helped by this program and was for two decades a world leader due to its low production costs (57). However, from the 1970s on shipping was usually an inefficient, high cost and, therefore, uncompetitive industry. Government supports thereafter were a response to political pressures and the desire to maintain a Japanese flag merchant fleet (58). Shipbuilding also declined in competitiveness in the 1970s, in part because of competition from low-cost shipbuilders in Korea and elsewhere. Government shipbuilding policies in the 1970s and 1980s followed a recessed industry more than

a development model as a result (59). Business, labor and LDP politicians were active in seeking funds for both industries. Policies in these two declining industry sectors also indicate the presence of alternative government goals to growth.

Of the industries targeted for support in the 1950s and 1960s electric power is not normally evaluated in terms of success or failure. Electricity outputs kept up with growth in most periods, and the industry can be seen as performing its infrastructure role credibly for this reason. It was this infrastructure argument plus the high costs later of nuclear power development which led the Japan Development Bank to continue disproportionately high levels of support for this industry. However, Japan still has higher electricity rates than other industrialized countries (60).

Supportive Economic, Social and Political Institutions. In a recent study of British, French and German economic policy, Peter Hall attributed distinctive policy effects in the different countries to broad "institutional" patterns in their respective political economies. Institutions in this instance are patterns of behavior in government and economic markets and also in society itself (61). A similar institutional inventory can be suggested for Japan. Several aspects of Japan's society, economy and political experience seem on logical grounds to have favored the country's high growth. Alternatively, they did not act as an obstacle to development even if they did not play a specifically supportive role. Econometric research supports the importance to growth of some of the institutional patterns to be discussed; others are more speculative (62):

a) Savings and Investment. Japan's savings rate was very high during most of the postwar era as was already discussed. Although fairly low in the years immediately following World War II, personal savings rates increased to a peak of 15% in 1970-1974. Corporate savings followed more or less a similar trajectory, but peaked in the 1960s high growth era (63). So did gross savings which includes government and corporate savings in addition to individual savings (see again Table 2)(64).

Investment was also very high in Japan in comparison with other countries, even though even Japan's high savings were sometimes inadequate for investment needs (65). Corporate savings were directly applied to investments in plant, equipment or technology, or in some cases reduction of a firm's financial dependency on bank loans (66). Individual savings were themselves marshalled through postal savings or bank accounts to provide funding opportunities through the FILP-government bank connection or the commercial banking system.

The relative abundance of savings and the relatedly high levels of investment are normally seen as one of the most significant forces in postwar Japanese growth. Some scholars see these twin factors as the leading factor in development. However,

while most persons grant the importance of investment and saving, disagreement is common as to the government role in their stimulation. Nobody would argue against the idea that the Japanese governments' conservative fiscal policies increased the share of wealth which could be potentially allocated to savings and investment. But the assertion by some experts that government policy stimulated investment by lowering interest on loans to industry below levels in other countries has been challenged by economic research. Interest rates on loans in Japan have been lower in some periods but this is said to reflect an abundance of savings more than government monetary policy (67). Also, government authorized tax exemptions on savings deposits are similarly said to have had little effect according to recent economic studies, despite widespread assertions to the contrary (68).

The government role in lending to industry is another example of policies whose importance and impact are debated. Given the central role of borrowing relative to equity in Japanese corporate practice, the role of bank lending in investments leading to modernization and expansion was critical. However, commercial institutions provided most of the investment funds in most industries at most times, as we have seen. This fact notwithstanding, government indicative lending could still have had an unusual leverage effect, given corporations' typical dependence on debt rather than equity (69). Several scholars have asserted that this is what took place. Government bank loans are believed to have been of special indicative significance, especially in the early postwar years (70).

Many economists judge that government lending did not play a direct indicative role. We have already cited the limiting effects on government bank lending produced by an early bias for power, coal and shipping. Other factors such as the complexity of bank lending decisions and the increasing availability of loans to all industries as growth advanced have also been cited as evidence in arguments against seeing government bank loans as having indicative effects (71). In addition, FILP related funds were used increasingly over time to support general infrastructure development (roads, ports, industrial parks, etc.) and other priority concerns. Lending to "targeted" growth industries generally failed to reach significant indicative levels, other things being equal, as a result.

The alleged limitations on the government's direct role in lending to industry seem credible. However, evaluating Japanese economic policy is much like the proverbial peeling of an artichoke; as each leaf is removed, still another layer is discovered. In this case, one of Japan's leading economists has argued that government bank borrowing was seen by firms as a safety net, and that corporate investment strategies were unusually daring as a result (72). Firms could in effect take risks on the assumption that the government would bail them out if this led to problems, In this sense, the FILP and related government lending institutions could have had a substantial, positive impact on growth.

b) A second significant institutional pattern in postwar growth was the high level of competitiveness of Japanese firms. Aggressive inter-firm competition is cited frequently as a causal factor in economic analyses of industry successes, even though it is not easily measured other than by anecdotal information (73). However, some aspects of Japanese experience, such as the substantial frequency among both small and large enterprises of deviations or defections from inter-firm cartel agreements regarding capacity allocation and other matters suggest themselves as indicators of competitiveness. David Friedman offers the following example of the difficulties in getting firms to cooperate in the machine tool industry (74):

> "Though this draft was substantial progress toward an agreement, some gyokai members balked again... Intercompany mistrust was the main obstacle...changes in gyokai membership further confused matters...Outsiders, of course, were under no obligation to observe the restraint agreement...In some segments of the machine tool market outsider firms were the largest single manufacturers".

High levels of inter-firm competition are said by some to reflect postwar structural change, especially the breakup of the zaibatsu holding companies and the new Anti-Monopoly Law's sanctions against excessive concentration and illegal cartels (75). Individual companies' desire for the benefits accruing from market domination is another likely correlate of competitiveness. These included tangible benefits such as greater economies of scale and perhaps greater certainty as to the demand for a firm's output. Less tangible rewards such as the higher status assigned to dominant firms also exist in hierarchy conscious Japan. Firm competitiveness may also have reflected other forces. Other factors such as strong in-group attachments in a society where in and out-group (uchi-soto) distinctions are important, company loyalties reflecting lifetime employment in the same firm and keiretsu traditions of feudal clan-like loyalties to groupings of firms are also sometimes cited as explanations of high competition levels. Lifetime employment also means that significant portions of the large enterprise work force depend on firms' survival and growth, another potent reason for aggressive firm behavior.

Inter-firm competitiveness at a time of high economic expectations was likely a major factor in growth, and may help explain the Japanese economy's tendency in some periods to quickly surpass planned output goals. However, competitiveness also had potentially negative effects. Competitive capacity expansion in the steel industry ultimately led to excess capacity in that sector. The same forces appear at work in the Japanese automobile industry today. The tendency to strong inter-firm competitiveness was rightly or wrongly one of the motivations (in addition to a desire simply to create larger firms) behind MITI planners' efforts in the 1960s and 1970s to promote mergers in the automobile and computer industries (76). Controlling allegedly destructive competitiveness was also a government concern in policies

toward medium and small businesses.

c) The character of Japan's labor markets has been relevant in various ways to Japan's development potential. Until the late 1960s there were enough persons in the labor market, including young people who left parental homes in the low-efficiency agricultural and small firm sector for jobs in large firms, to permit rapid economic expansion without accompanying strong pressure on wages (77). Money saved on labor costs could, ceter paribus, be invested to improve firm productivity or expand capacity, a condition which obviously facilitated economic growth. However, since the late 1960s there have been periodic labor shortages. A variety of practices, including employment of larger numbers of middle-aged women, postponement of the retirement age, and illegal immigration, have alleviated labor shortages at various junctures. Over the long term, the shortage of labor will probably be an important factor limiting growth in its traditional forms and favoring structural change in the Japanese economy.

The relative quiescence of private sector labor relations should also be seen as contributing to Japan's growth potential. Enterprise unionism and lifetime employment are parts of a system in which labor's fate was identified with the success or failure of the firm. These practices and the associated tendency for workers to engage in mainly short "symbolic" strikes made it possible for firms to adopt long-term strategies with some certainty as to the availability and cost of labor in the foreseeable future (78).

Economy-wide "patterned bargaining" is a standard practice in Japan. Still, the existence of enterprise unions encouraged sensitivity to a specific firm's condition in labor-management negotiations. Inclusion of lower levels of management in enterprise unions also made it possible for union members to know the firm's actual economic situation, which was another factor permitting labor demands to be "fine tuned" to company conditions. Under such conditions, sustained labor disruptions which would undermine a company's market viability were usually avoided. Lifetime employment also made technological change less of a threat to the work force, which could in times of expanding markets and production count on continued employment while benefitting from firm growth. Process innovations such as quality circles, which are believed to have facilitated training and productivity growth, were also facilitated by labor cooperation (79).

d) Japan has long been known for its dual economic structure, wherein small firms are more numerous and occupy a larger role in the economy than in other industrialized countries (80). Often the small firm sector is seen as inefficient, However in some industries small firms are believed to have excelled in flexible manufacturing. According to the flexible manufacturing hypothesis, small firms in industries like machine tools have been able to rapidly adjust their output to changing

conditions and to flexibly produce different products to take advantage of market "niches" of varying kinds (81). Elsewhere in the economy, small supplier firms are said to serve as a cushion to large firms by allowing the larger firms to reduce labor costs. This is often said to be the practice in such assembly dominated industries as automobiles. In some cases small supplier firms are said to also absorb the effects of economic downturns, albeit this is recognized to occur at considerable social cost (82).

e) Rapid postwar economic growth in the industrialized world plus an international commitment to free trade also facilitated Japanese growth in the 1950s and 1960s. Japan's growth in the entire postwar era depended on her ability to sell sufficient amounts of products abroad to pay for raw material imports needed for a growing economy. A free trade regime made this possible. Also, while Japan's early postwar growth reflected the pull of internal demand for industrial equipment and consumer durables, in some later years exports were the locomotive of growth (83). This was the case during the sustained domestic recessions of the 1970s (84).

f) Japan's dynamic growth may in some areas also reflect the Japanese government's limited direct ownership role in the economy compared with postwar Europe. All of Japan's telecommunications and the major international Japanese air carrier were government owned until the privatization of the mid-1980s. So was much of the Japanese railway system. All long-distance lines were publicly owned, although there were private rail and subway operations in the largest cities. But comparability with Europe stops at this point. Unlike the French government, Japan had no nationalized banks. Nor did Japan's government own or manage manufacturing and production facilities in economic sectors such as iron and steel, electric power, petroleum refining and automobiles, whereas one or another of these industries was wholly or partly publicly owned and operated at some time in postwar France, Britain, Germany and Italy (85). The modest direct role of the Japanese state is not well appreciated abroad, where a much more substantial level of government intervention is usually assumed to exist.

Levels of government ownership were thus limited in Japan compared with other major economies (86). (The United States is an exception, and Japan looked somewhat more like a typical European government until recently. But the United States is a notable outlier among advanced nations on the dimension of public ownership). After the mid-1980s the Japanese government's direct role in the economy was further limited by privatization of the national railways, Japan Air Lines and Nippon Telephone and Telegraph. (The government still owns major portions of the stock in the divested companies. Complete de facto separation has been slow due to lack of market interest in the privatized firms' stocks. Still, the management of the firms, their relationships with labor and their ties with other firms are radically different from before privatization.) Finally, while the Japanese government has

played a prominent and to some observers fairly important role in technology development since the early 1970s through sponsorship of high profile research projects, government investments in "R and D" are also lower than those in most other major industrialized countries (87). To the extent that Japanese government intervention was (a) confined to "normal" infra-structure development and maintenence, and (b) followed the market as to industrial policy, Japan arguably profited from the absence of the inefficiencies sometimes attributed to European public ownership.

g) Japan's political stability under conservative rule created a favorable environment for growth. First and foremost, stable conservative rule in the 1950s assured private sector leadership that the economy would not be nationalized or cooperativized, as was advocated by the Socialist and Communist parties at that time. Conservative dominance also assured business that political leadership would possess values generally receptive to business interests viewed broadly (88). Stable political expectations further made it possible for firms to develop long-term business strategies without fears that important government regulations and tax policies would suddenly change. The importance of all of these conditions could be seen in frequent business group condemnations of conservative party leadership when this supportive environment seemed to be on the brink of political collapse through conservative party ineptitude (89).

h) Japan's social homogeneity is also a plausible factor contributing to economic growth. Social class has never been as important a cleavage in Japan as in Western Europe. A variety of reasons, among them egalitarianism in educational opportunity and military service dating as far back as the late 1800s, can be cited for this state of affiars. The parochial nature of Japanese society may also be relevant, since outbreaks of class conflict in rural communities during the Tokugawa and pre-war periods never developed into national movements. Cleavages based on religious differences have been similarly muted in the modem period, while regionalism declined significantly as a major political force after the Meiji reformation (90).

Postwar Japan thus did not have the profound social cleavages of inter-war Europe -the more relevant point for comparison in terms of relative political development. Postwar Japanese governments were able to focus on the goal of growth relatively unimpeded by the kinds of major political conflicts such as occurred at times in other more cleavage ridden political systems (91). The Socialist and other opposition parties and their trade union allies tried valiantly to arouse a widespread class consciousness in Japan. While their mobilizational efforts supported a parliamentary opposition to the dominant conservatives, class struggles did not dominate policy agendas as they did at times in inter-war Europe, or even postwar Britain in the 1970s. Relative social homogeneity and the absence of a class

cleavage, plus conservative rule, was also one of several factors allowing the Japanese state to postpone some of the costs of a modem social welfare system until after high growth was well on its way. The enormous social and political costs of an American-style under-class have also obviously been avoided.

i) Economic models of Japan's growth recognize that Japan's high literacy and education levels at the end of World War II were themselves important inputs in initial postwar growth. Later, as households became more affluent, greater numbers of sons and daughters were able to finish high school and/or college, which further enhanced the skiff potentials of the labor force (92).

Unanticipated Consequences: Subversion, Non-Compliance and "Irrational" Outcomes. Japanese government economic policies sometimes had unintended consequences. Business cycles intervened to upset the calculations of particular plans and industrial policy frameworks (93). Furthermore, despite high levels of business-government communication and an asserted corporatist consensus on economic policy, case studies indicate frequent private sector resistance to government policy proposals and programs, Private firms also exploited and manipulated government policies in ways that were not congenial to government intentions. Companies in some instances totally evaded government policy directives. As a result, many of the Japanese government's industrial supports cannot be seen as fully successful from the point of view of government intentions.

Examples of private sector exploitation of government programs are easy to find in the cases where detailed policy analysis has been conducted. For example, subsidies provided coal companies under the 1947 Priority Production Program did little to improve mine efficiency, which was one of the goals of the program. Coal firms mined marginal fields because the higher production costs there were paid by the government under the existing programs. Mining firms saved their better fields for future use when costs would not to be subsidized (94). Under the same program, government funds to encourage coal firms to install productivity enhancing equipment were diverted to stockpile new equipment until after cost-based renumeration ended (95). Later, the 1955 coal rationalization plan goal of retiring inefficient mines was subverted when firms sold old, depleted mines to the government while simultaneously opening new facilities without regard to their efficiency (96). Moreover, in some periods, large mining companies even bought coal from small-scale, less efficient firms in order to take advantage of high prices while simultaneously receiving government supports designed to enhance their own efficiency (97).

Other industries displayed similar patterns to those in coal. In the textile industry, government programs set up to purchase old equipment for the purpose of curtailing capacity were subverted in much the same way as in the coal industry.

Textile makers kept obsolete machinery which they would have normally abandoned in the hope that it would be purchased by the government under purchase-and-scrap programs (98). Elsewhere, government directives to machine tool makers regarding product concentration and other kinds of cooperation were often ignored while production responded much more to market demand than government plans (99).

Resistance to MITI's plans for industrial re-structuring in the automobile and computer industries is also well-known. So are defections from MITI supervised steel capacity plans in both the 1950s and 1960s (100). Capacity increases in the steel industry thus reflected intense inter-firm competition for market share rather than government supported cooperation. Other examples of defections from policy intentions at the firm level indicate that Japanese economic policymaking usually encompasses a rich diversity of motivations and often has multiple unintended consequences. It has long been thought that government policies should be easier to implement where the number of firms is small (as in steel, automobiles and computers) relative to those like machine tools where there are many firms. However, it is equally obvious that firms in all industries resist government technocrats when it suits them to do so.

It is also important to realize that government endorsed economic growth had negative effects on the quality of Japanese life in the postwar era as well as making positive contributions to real incomes and shared affluence. Japan is a crowded nation with extremely little space, and ranks with Korea, Indonesia, the Netherlands, and Belgium as one of the most heavily populated places on earth. Japan's population concentration is especially burdensome in large cities and their surrounding regions. For example, Tokyo prefecture's population density in 1990 was 5,430 persons per square kilometer, a figure dramatically higher than the national average of 332. Population movement to the cities and development of regional industrial centers in the 1950s and 1960s brought enormous crowding to already overcrowded areas.

Urban overcrowding was one major consequence of high growth about which not very much can be done beyond regional de-concentration of industry and service centers. Population increases in the cities and suburbs had many consequences. Japan has one of the best urban rapid transit systems in the world, and made many improvements in train and subway lines in the 1960s and 1970s. Yet growth and urbanization meant no end to overcrowding of trains and long commuting times. Statistics are inadequate indicators of the scale of this problem. Persons living as far as two hours from Tokyo must scramble for standing space on trains during the rush hour. Roads and highways are also enormously overcrowded much like urban rapid transit. Even though Japan's government has spent a great deal on highway construction, the proportion of paved roads in Japan still ranks substantially below that for other major industrialized countries.

Japan's waste disposal and utilities systems are also hard put to keep up with demand, and showed signs of stress well before those in the United States. Compared with other industrialized countries, Japan also lags in sewage disposal facilities. In 1973 only 31 percent of Japanese homes had flush toilets, in contrast with figures above 90 percent in Britain, the United States, France, Sweden and West Germany. Even in 1989, only 42 percent of homes in Japan were connected to sewer lines, whereas the figures for other advanced industrial countries were substantially higher (101).

Conditions in Osaka, Tokyo and other major cities are much better than the national average, but the national comparisons are still important indicators of nationwide lags in performance. Finally, Japan's cities have relatively little space for parks, and the growth of urban populations brought even lower ratios of park land per-capita than had been the case previously. In 1989, there were only 2.5 square meters of park space per resident in Tokyo, compared to 37 in Bonn, 30 in London, and 24 in Chicago (102).

Deficiencies in transport and social capital were matched by a growing pollution problem which surfaced in the nation's attention in the late 1960s. With most of its population and all of its industrialized centers concentrated on only 20 percent of its land, Japan by the early 1970s had the highest concentration of industrial output and energy use per kilometer in the industrialized world (Table 5). The figures were substantially greater than in Europe, which is also crowded, and dramatically higher than in the more sparsely populated United States. Japan also had severe water pollution problems at times, including some even in the nineteenth century. The painful consequences of overcrowding of Japan's urban and industrial districts became very obvious by the late 1960s and early 1970s, as high growth brought more factories, cars, and homes to the country's most heavily populated areas and even began to spread the polluting effects of industrial growth to remote parts of the archipelago through regional industrialization. As trees died and as birds fled the cities and as people suffered from air, water, noise, and even "sunshine pollution" -the shutting off of direct sunlight by construction of high-rise apartments- a myriad of local citizen movements opposed to pollution and regional growth sprung up around the country.

One of the immutables of Japan's physical setting is the shortage of usable land and space. The land-population ratio is reflected very directly in pollution problems. It is also at the root of severe overcrowding and astronomical land prices. Land speculation has made the costs of land even higher. Neither of these problems were new to Japan, but during the high growth period they became much more acute. In 1963, the average dwelling had just under four rooms and a total area of 72.5 square meters (roughly 24 by 27 feet). Twenty five years later there had been a

20 percent increases in the size of homes. Construction of slightly larger homes and shrinkage of family size resulted in an even greater increase in space per person. Whereas each person had a little over 7 square meters of space in 1963, by 1989 it was 12 square meters (103). While this growth was salutary, Japan was still an extremely crowded place by comparative standards, and population pressure on housing was a constant problem. In most years in the 1970s and the 1980s, land price inflation considerably exceeded general inflation trends. In addition, in comparative terms, both land and housing prices were and remain extremely high in Japan. In 1979 one square meter of residential land in Tokyo cost on the average $43 thousand, roughly the cost of a typical 1500 square meter lot in an expensive suburb in many cities in the United States in the same year. Even in remote areas like the southern island of Kyushu, a square meter of land cost roughly $15 thousand. Meanwhile, the cost of houses soared to a multiple of seven times annual income in the late 1980s, and many married couples were unable to purchase homes until their mid-forties, if indeed they were able to buy them then (104).

Because of the chronic shortage and high cost of homes, demand for public housing in Japan was consistently high despite considerable national and local expenditures on housing over the years. For example, applications for housing units in public projects ranged from eight to eighty-five requests for one vacancy in Tokyo in the early 1970s (with the different ratios depending on the cost and type of housing)(105). Housing therefore joins other social capital investments as a major lingering problem for government in Japan.

Economic Welfare, Clientelism and the Crisis and Compensation Hypothesis. Much of political economy research on Japan has described and sought explanations for that country's phenomenal postwar growth. However, not all of Japan's industries have been successful at all times. The coal industry lost competitiveness in the late 1950s and one or another segment of the textile industry had problems virtually throughout the postwar period. Several major industries, including shipbuilding, iron and steel, petrochemicals and aluminum, were "structurally depressed" in the 1970s and sometimes later as the result of the oil crises' effects on production costs and demand (especially the demand for ships). Competition from newly industrializing countries including Korea and Taiwan also affected demand for some Japanese products. The shipping industry was itself also intermittently in bad straits, as was described earlier (106).

In each of these examples of industrial decline, the Japanese government responded with measures such as capacity reductions (frequently including government purchase of excess equipment), employee retraining and efforts for regional economic renewal. In some periods, the government orchestrated remedial programs involving labor force and facilities reductions, anti-recession cartels, and special recovery loans. At times, industries which employed as many as one out of

every five of Japanese workers were affected. Medium and small businesses, many of which were chronically weak financially (although some also did quite well through modernization programs), also received a substantial amount of government support throughout much of the postwar era.

The magnitude of attention given weak and sick industries by Japan's postwar governments is shown by the numbers of major policies and amounts of resources allocated to address their problems. Figure 6 shows the numbers of MITI plans and programs dedicated to growth industries contrasted -with proposed solutions for problem sectors, and thus indicates in a rough sense the degree of policy concern for each area. The source is annual ministry policy reports. Table 6 in turn shows the amounts of FILP program funds allocated to small business loans compared with lending to large business. Quite a bit of the financial support given small business addressed temporary or long-term economic woes in particular small firm sectors. Substantial funds were also supplied for modernization of small firms through the introduction of automated equipment and other improvements. The two goals are not mutually exclusive.

What is striking about these two sets of data is how much attention has been paid to less economically promising economic sectors compared with support for successful industries. Almost as much attention was paid to problem industries as to growth sectors. One hundred twenty five growth programs were cited in annual ministry reports between 1955 and 1980, but there were also 109 recession policies. If the purpose of market interventions, a third category of MITI actions in our information, was known in all instances, recession programs might outnumber growth frameworks (107).

Quantitative data on allocations of FILP loans to "basic industries" (the large firm growth sector) and medium and small businesses tell a similar story. By the mid-1960s Japanese governments were spending twice as much or more on small business as on large firm development. Later even larger disparities could be observed. Although it is true that not all small businesses were economic disasters, many small business programs were remedial in nature. One might conclude that Japan's role as an "economic welfare" state is as important as its role as a "developmental state".

Information from the 1960s and 1970s regarding the timing of government loans relative to production growth and value added in the production process (Table 7) tells a similar story as to the relationship between industry success or failure and government policy response. In industries like automobiles, precision instruments and consumer electronics the proportion of Japan Development Bank loans remained low throughout the postwar era. Borrowing from the JDB also declined in most periods relative to both gross output and value added, which implies that firms

needed less from government banks as they became more successful and efficient (108). In contrast, in troubled industries such as iron and steel and non-ferrous metals, the patterns of dependence on government borrowing were actually reversed. Over time borrowing from the JDB increased as a share of all borrowing; dependence on JDB loans also increased in relationship to output and value added. Since we lacked data on the 1950s, we could not analyze periods when JDB lending had different implications. But with this exception, the figures tell a remarkable story of government responsiveness to industry difficulties relative to industry successes.

Japan as a Politically Clientelistic State. The idea of seeing Japan as an economic welfare state is very appealing. The degree of attention paid to sustaining employment during hard times in industries affected by oil price "shocks," cyclical downturns, high yen influenced declines in export sales, removal of protective tariffs and quotas and other factors is impressive. But Japan under Liberal Democratic rule is also a "clientelistic state". Many programs targeted at weak economic sectors are motivated by a political concern for aiding conservative party supporters as much as for other reasons. Quite a few scholars would even say that clientelism supersedes welfare in importance as a motivation. Interest groups, individual Dietmembers and intra-LDP policy "families" actively seek help from the government on behalf of traditional LDP clients such as farmers and small business. Representatives of constituencies where recessed industries are located also ask for help, often in the form of public works outlays which favor another LDP client, the construction industry. Much of Japan's domestic policy agenda is affected by their actions (109).

Japanese farmers are another major LDP client and have done unusually well compared with large industry throughout the postwar era (see Table 6). If support for farm programs is added to the amounts provided medium and small business, the enormous size of Japan's role as some combination of "economic welfare" and "clientelistic" state becomes clear. Outlays to clients or "welfare" sectors have always exceeded amounts provided for economic growth by a ratio of from 3:1 to 6:1. The popular image of Japan as a developmental state obviously needs some qualification.

Recent research has modified earlier images which ignored or failed to give detailed attention to the clientelistic and welfare oriented aspects of the Japanese political economy. Kent Calder, in particular, has pointed to the importance of LDP clientelism and developed a challenging thesis as to its timing (110). Calder's general thesis that clientelism is an important driving force in the Japanese political economy is well supported by data on government support for different economic sectors, as was shown.

Calder has also proposed a "crisis and compensation" hypothesis that suggests LDP electoral losses and internal party conflict were a driving force in

sporadically intensified attention to client oriented programs. Expansions of supports for farmers, small business, social welfare and public works are asserted to reflect these feelings of LDP electoral vulnerability and possible internal breakdown.

The "crisis and compensation" hypothesis is important to understanding of the LDPs strategies to stay in power. Table 8 contains budget and loan data relevant to the crisis and compensation concept. Japanese government allocations over time to public works, small business, agriculture and social welfare are noted as are indicators for political and economic crises. Two kinds of results are notable. First, public works appear to be insensitive to political crises as defined by Calder. Public works outlays systematically increased in the 1960s compared with the 1950s. However, expanded public works outlays in the 1960s did not correlate directly with crises and were probably as much a reflection of increased revenues and other factors as manifestations of a crisis response. Concern for infrastructure development grew in Japan as high growth proceeded, and there was considerable infrastructure investment in anticipation of the 1964 Tokyo Olympics. Japanese leaders at this time were concerned that their country make a good appearance in the face of world attention. Thereafter public works displayed a trajectory more readily explainable by incrementalist models of budgeting than as a response to crises (111). The only unusual deviation in expenditures for public works after the 1960s took place in the early 1970s and appears to have been a response to a severe economic downturn at the tail end of the high growth era in 1970-1971.

Programs destined for the small business and farm sectors also showed little apparent crisis sensitivity, with the possible exception of the growing attention paid to these sectors beginning in the mid-to-late 1950s. After this increase, incrementalism seems as plausible a macro-explanation for the trends in allocations to these sectors indicated in Table 8 as any other policy motivation. Even the 1950s and 1960s increases in support for farmers and small businesses defies easy analysis as a crisis response. Many institutional patterns of Japan's postwar political economy were only emerging at that time. The enactment of several broad legislative packages for farmers and small businesses in these years reflected both the increased organizational power of the relevant interest groups and the resolution or abandonment of 1950s ideological issues (112). The late 1950s and early 1960s were also a time of both increasing tax revenues and urban recovery, both of which permitted devoting political attention to lagging rural incomes. The Japanese political economy shows strong effects of clientelism, but crises seem a less credible factor in the timing of these responses than other plausible causes (113).

Social welfare outlays did increase at a time of structural change in Japanese society and related LDP electoral losses. As is well known, economic growth from the 1960s on was accompanied by rapid urban and suburban population increase. Farm family sons and daughters moved to cities while parents remained behind on the

farm. Many persons moved to city apartments too small to accommodate aged parents. The proportion of elderly living with their children declined because of these trends, at the same time that the proportion of older people in the population was on the increase. In some senses, jobs in industry and services, which increased in number as the economy grew, also provided less security than traditional rural life.

The LDP itself experienced substantial electoral losses as the population became more mobile and persons with urban occupations (and therefore often opposition party attachments) spilled out of the cities into surrounding areas. The LDP's loss to opposition party candidates of many city mayorships and urban prefecture governorships was especially vexing. Opposition control of local governments itself led to expansion of social welfare services in a number of important cases. The political events in local politics and structural change created a window of opportunity for policy change. However, it was mainly bureaucrats and not LDP leaders who took advantage of this opening to propose significant increases in medical insurance coverage for the aged and other social welfare system improvements (114).

Trade Successes, Trade Issues, Liberalization and the Partial Dismantling of the Developmental State. Indicative economic planning has continued in Japan although the rhetoric of plans from the mid-1960s on increasingly has stressed economic stability and quality of life. The Japanese economy also grew in most years even though growth rates in the 1970s and 1980s were considerably lower than those of the 1960s. Moreover, Japan's economic growth during the 1970s was uneven in different industries. Industries such as automobiles and electronics were highly successful while others like iron and steel underwent a "structural" recession. Foreign trade, which had prospered during the high growth period, continued to flourish in the 1970s but with a different product mix. Automobiles and consumer electronics were more prominent while shipbuilding and iron and steel, which had been 1950s and 1960s leaders, declined in importance.

Japan's role in world trade has grown at levels matching her domestic economic growth. In 1958 Japan's total exports were a nominal $2.8 billion. By 1975 foreign trade had grown to $55 billion, in 1980 it was $127 billion and by 1990 the trade figure was 287 billion dollars. Exports quadrupled in the 1970s and doubled once again in the 1980s. Reflecting these figures, Japan's share of total world trade increased from around 3 percent in 1960 to 12 percent in 1990. While inflation in oil prices and enormous growth in the value of petroleum trade changed the structure of world commerce and depressed markets in many countries during the 1970s, Japan's foreign sales of some products continued to boom (115).

Japan's postwar trade success was predicated on free and expanding world commerce. Increased external demand for Japanese products was also important.

Expanded trade levels permitted Japan to import the raw materials necessary to fuel high growth, satisfy new food preferences among the Japanese population and pay its huge oil bills in the 1970s. Exports were also the motor driving economic growth in the 1970s and in part of the 1980s. At the same time, the success of Japanese products like color television sets, automobiles, and high quality steel produced adverse reactions in other countries and created political problems for Japan's government.

The long-tem growth of Japan's foreign trade was in some senses a mixed blessing. Japan's success in foreign markets led to requests for opening of Japan's domestic market for manufactures as early as the 1960s. Even though in many years Japan has an adverse trade balance as the result of the huge internal demand for imported energy and other industrial needs, success in selected export markets resulted in adverse reactions. Foreign governments including the United States deplored Japan's then high tariffs and numerous import quotas. The Japanese government responded to these requests over time by lowering tariffs, eliminating import quotas (see Table 9) and freeing foreign investments in Japanese industries. Usually these actions elicited strong support from Japan's major big business organization, the Federation of Economic Organizations, but strong opposition from individual industries affected by the changes (116). By the mid-1970s only a handful of products were still protected by import quotas, and, as in other advanced countries, most of these were farm goods. Also, by 1980 Japan's average tariffs were below those of the United States and the EEC (117). In at least formal terms, Japan's economy was open to the world in most product areas.

Despite formal liberalization Japan has continued to be a target of criticism in trade disputes with the United States and other countries. Businessmen and politicians abroad responded to continuing and often expanding trade deficits with Japan by accusing that country of continuing to maintain import barriers. After Japan had reduced or eliminated most of its formal quotas and tariff barriers, criticisms from abroad focused on alleged non-tariff barriers like inspection procedures, domestic commodity taxes and government procurement policies. In the case of textiles, steel, color television sets and automobiles, foreign requests led the Japanese government to impose restrictions on exports to specific countries or regions. However, trade deficits with Japan persisted in both the United States and Europe (and even grew in some instances). Trade issues continued to dominate Japan's relationships with other advanced countries as the 1980s went on. Japan's domestic political agenda is also affected by these disputes, as the discussion of rice liberalization issues and Large Store Law reform bears witness.

Japan has always been heavily dependent on foreign raw materials to supply its industries, and many have marveled at Japan's economic success in the face of such a pronounced native shortage of industrial minerals and energy sources.

Maintenence of adequate levels of exports to pay for raw material and energy imports has long been a government and private sector concern, as has also been a concern for dependable sources of supply, Japan's foreign trade policy in the 1950s was oriented toward securing adequate supplies of foreign raw materials and maintenance of export levels sufficient to pay for these needed imports. As the postwar Japanese economy grew, and imports of even larger volumes of foreign raw materials became necessary, the concern for having secure foreign sources of supply accelerated. The two 1970s oil crises brought further acute realization of the importance of secure sources of needed resources among policymakers. In a significant shift in priorities, the Ministry of Foreign Affairs announced in 1973 that henceforth secure access to raw materials would be a driving concern in Japan's diplomacy. In a related series of events, the economic ministries joined the foreign ministry and private sector interests to promote policies aimed at development of overseas sources of raw materials. Japan signed agreements with the USSR on (a) natural gas development in the Yakutsk basin in 1973, (b) development of Siberia in 1974, and (c) rights to off-shore oil deposits near Russian Sakhalin in 1975. Similarly, Japan made loans to oil-rich Abu Dhabi, lent money for development of natural gas in Indonesia, and signed an economic cooperation agreement with Iran, followed later by a government-supported oil refinery project in that country. Rights over off-shore oil deposits in the East China Sea and elsewhere also became major issues between Japan, the Republic of Korea, the People's Republic of China, and the Republic of China government on Taiwan as all of the countries in the Northwest Pacific realized the urgency of their energy needs. Elsewhere efforts were made to secure access to minerals and coal from Australia and other countries through private sector investments and initiatives.

Japan's policy support for industrial growth, structural change and technology induction through policy frameworks and government incentives declined over time as the economy grew and other priorities emerged. Timetables for industrial policy change have been influenced by foreign pressure at times, but there were usually also domestic reasons for change as well. Many of the industrial supports characteristic of the 1950s and 1960s have dwindled in importance as a result. As Table 9 indicates, FILP lending to "basic" industry (including industrial technology) has declined substantially and currently totals only about one-tenth of mid-1950s shares of FILP lending. The offering of tax incentives for industrial sector development has taken a similar downward trajectory. So have cartel agreements between firms, although cartels continue as a preferred instrument of market coordination during downturns in the economy. In addition, cartels have been employed more in the medium and small enterprise sector recently than in markets dominated by large firms, and their use has been common in recessed more than in developing industries. At present, Japan's government continues to support research projects designed to insure the country's development as a high technology, high value-added 21st century economic power. With only a few exceptions, industrial

policy to encourage growth and new industry development is a thing of the past.

Conclusion

The Japanese economy grew dramatically between the 1950s and the present. During the first two decades of this growth, the Japanese government produced batteries of industrial policies with the goal of developing infrastructure and achieving productivity gains in particular industries. In the 1970s and later, government aid was provided the computer industry and "high" technology development. Indicative economic plans which called for growth of the total economy were also formulated. Because of the coincidence between government support and economic success, Japan became known abroad as a successful example of government-led high growth.

Evaluations of the direct role of indicative planning and so-called industrial targeting have varied depending on scholarly biases and methodology choices. Understanding government policy impact is difficult in the face of these divergences. Assessing the separate contributions of government policy frameworks, commercial bank decisions, general demand draw and other factors adds to the difficulties, as does also the absence of satisfactory counter-factuals. However, it can be said with confidence that:

(a) tax incentives, lending and some other instruments required by key-industry development plans likely helped facilitate growth by creating favorable conditions for investment in long-term capital improvements, iron and steel ad to a lesser degree in other industries;

(b) the amounts of government investment in most industries were too small relative to private bank funding to have the indicative effects often attributed to them;

(c) since commercial bank lending decisions depended on many different factors, government lending likely played only a limited role after the early 1950s, with the exception of the shipping, coal and electric power industries, where government lending often matched private bank participation;

(d) government priorities also favored declining or problem industries in the case of coal and shipping with the result that considerable amounts of government funds were mis-allocated from an economic point of view (118);

(e) when the extensive supports given recessed industries, medium and small industries and farmers are considered, Japan appears to be as much an economic welfare and clientelist state as a developmental state.

Japanese economic and industrial performance also reflected the influence of variables not clearly subject to the direct control of government. Japanese companies have often competed intensely for market share which in turn favored long-range planning and investment. A very high national savings ratio was itself of vital importance as a support for capital investment and growth and usually was sufficient to provide the funds needed for capital expansion. Even though the image of the Japanese worker as a docile, highly motivated producer is overdrawn, labor's role in growth was itself far from insignificant. The permanent employment system in large corporations encouraged development of workplace discipline and strong company loyalties. The presence of enterprise rather than industry unions in the private sector was one of several factors encouraging stable labor conditions.

Improved process technologies such as the highly touted "just in time" auto parts supply system have also made a big contribution to production efficiency and to growth, Japan's educational system was itself undoubtedly a major factor encouraging growth. On the supply side, it provided for high levels of literacy and basic mathematics and science training, which ensured a high quality labor force, other things being equal. On the demand side, mass education is one of many factors in the development of modem communications systems and consumer-market development.

All of this is not to say that the Japanese government played no role in the economy's success. The government was usually a participant in high level discussions of growth potentials and provided leadership for growth at a time when private firms also saw that growth was both possible and profitable. The government was, in effect, a cheerleader for growth, and shared vast amounts of information with industry in the process. The government also provided a stable and supportive environment for business growth. Businesses could invest without undue fear of either nationalization of industries (as favored by the opposition in the 1950s) or other major changes in the political environment. Government bank loans and policies also created the perception in many firms that the government would stand behind particular industries, which led firms in turn to make "daring" investments according to some accounts.

The total effect of these conditions was to create a "policy regime" which favored growth. Japanese government development of industrial zones adjacent to deep water ports has also helped reduce the prices of some raw materials to as little as one half of comparable prices in the United States, with its higher costs due to dependence on land transportation (119). Indeed, the Japanese government's investments in infra-structure have been enormous and may constitute its single most important contribution to growth from the 1960s forward.

Government policies also played a direct but also hard-to-measure role in specific industry development. The steel industry, for example, went through two major renovation plans during the time that it was "targeted" for modernization, with the result that Japan had the most advanced steelmaking equipment in the world by the beginning of the 1960s. Government lending and leadership appear to have facilitated this development. The Japanese automobile industry was protected from foreign competition in its postwar period of infancy and was able to import foreign technology at a critical juncture in its own development, even though it didn't receive much in government loans. Government supported "rationalization" in the automobile parts industry also may have had beneficial effects for the automobile industry. Later, when development of automated machinery was a government priority in the 1960s and 1970s, the automobile industry had higher levels of automation than industries in other countries because of heavy investments in robots and other types of automated equipment. These investments in improved facilities in some industries facilitated rapid and dramatic increases in labor productivity, resulting in Japan's leading the industrialized world in productivity increases in most recent years.

Frequent Japanese government policy adjustments in response to changing market situations were also a plausible strength in some cases. Plans were reviewed before their terminal dates and new plans were promulgated as growth outpaced plan targets, or other planning parameters changed. An allededly frequent adjustment of targets accords with a view which sees pragmatic, market following behavior as a major advantage of Japanese government planning regimes (120).

Large amounts of market information were collected and used to define and redefine targets and this extensive dependence on market indicators is also seen by quite a few persons as one of the most positive contributions of the government's policy-making (121). In essence, the policy environment itself became a component in the overall environment to which individual firms and industries responded in their own corporate strategies.

In some "macro" sense, the government provided a network of supportive frameworks which may have facilitated industry success. However, there were also many other factors influencing economic performance besides goverment actions, and the government role should not be seen as the sole or even single strongest influence on success in most instances. Indeed, as research shows, decisions at the firm level reflect many concerns, and government policy is only one (at times large, at times small) part of such environments. If Richard Samuels' findings on energy industries are generalizable, the real issue for businesses in government-business policy relationships is (a) how much the government can be persuaded to do what the private sectors prefers and (b) how much government policy tools can be exploited for private enterprise advantage. We have cited many examples of unintended policy consequences reflecting private sector subvention, avoidance and

manipulation. Some policies also failed completely as the result of adverse economic conditions or other factors including devious behavior by firms. The government role in industry "guidance" has itself also declined in virtually all sectors from the early 1950s onward. This decline has often been ignored by the foreign press and elite opinion abroad, with usually unfortunate policy implications.

While assessments of the government's role in terms beyond those discussed already are difficult, there is no doubt as to the role of government as focus, cheerleader and information provider. Intimate government-business communications in advisory committees and govemment-business group meetings, extensive negotiations of economic goals and the accumulation of large volumes of statistics to support government planning activity must have had a substantial effect in raising consciousness in the private sector about ongoing economic conditions and opportunities. The extreme geographical centralization of Japanese big business in Osaka and Tokyo, and the print media's concentration in these same cities, undoubtedly further enhanced the flow of relevant information. The activity of government indicative planning likely made important contributions to the thinking and motivations of political and economic actors, even while the plans and targets were not always directly reflected in GNP or targeted industry outcomes.

Postwar Japan was a country of high economic expectations, especially in the late 1950s and 1960s. Expectations of high growth led firms to expand, which fed growth itself. The policy regime of high growth expectations may have been the government's major contribution.

Table1

Table 1. Japan's Postwar Growth Was Very Dramatic

	Japan	United States	West Germany	Great Britain
Nominal GNP (in billions of US Dollars)				
1960	39	504	71	72
1965	89	688	115	100
1970	203	992	186	124
1975	498	1,549	421	234
1980	1,040	2,626	824	542
1985	1,340	3,974	970	463
1990	2,940	5,423	1,501	974
Per-Capita GNP (in US Dollars)				
1960	458	2,804	1,325	1,358
1965	704	3,142	1,687	1,585
1970	1,961	4,789	3,055	2,198
1975	4,499	7,148	6,781	4,082
1980	8,902	11,536	13,383	9,280
1985	11,100	16,610	15,900	8,250
1990	23,800	21,690	23,740	17,020

Source: All figures on nominal GNP are from Keizai Koho Center: Japan 1981: An Economic Comparison. Tokyo, 1981, p.9, and Japan 1992: An Internacional Comparison. Tokyo, 1992, p.12-13 and are based on Unite Nations estimated. 1960-1975 per capita data are from United Nations, Statistical Yearbook, and 1980-1990 per capita information is taken from Keizai Koho Center: Japan 1992: An International Comparison.

Table2

Table 2. Japan Taxed and Spent Less and Saved More in the Postwar Era Compared with Other Democracies

	Japan	France	West Germany	United Kingdom	United States
Taxes as % of GNP					
1965	18	35	32	32	27
1978	24	30	32	37	28
1987	28	34	30	42	26
Central Govertment Expenditures as % of GNP					
1960	13	30	28	29	25
1984	18	25	14	32	24
1989	15	23	13	26	22
Social Security Outlays as % of GNP					
1965	6	17	19	14	8
1978	10	24	20	10	10
1990	11	26	21	9	9
Defense Expenditures as % of GNP					
1965	1	6	4	3	7
1980	1	4	3	5	5
1988	1	4	3	5	6
Savings as % of GNP					
1960	25	16	20	11	9
1970	27	21	18	13	8
1980	18	11	10	6	6
1987	18	7	11	5	2

Sources: Taxes: OECD, Revenue Statistics of OECD Member Countries, 1965-79; Keizai Koho Center: Japan 1981: An International Comparison, p.65 and Japan 1991, p. 84
Expenditures: United Nations, Yearbook of National Accounts, 1980;Keizai Koho Center:Japan 1985, p.83 and Japan 1991, p.82
Social Security: Harold Wilensky, The Welfare State and Equality.Berkeley, University of California Press,1975; Keizai Koho Center, same source as "Taxes"
Defense: Gabriel Almond and G. Binghman Powell, Jr.: Comparative Politics. Boston,Little,Brown, 1978; Keizai Koho Centerm, Japan 1981, p.67 and Japan 1991, p. 85
Savings: United Nations, Yearbooks of National Accounts, 1977 and 1989

Table3

Table 3. Govertment's Share of New Lending was Usually Fairly Small but Still Significant (Y billion)

	New Loans to Industry			New Industrial Equipment Loans		
Year	Total	Government Banks	% Government	Total	JDB	% JDB
1955	635.8	38.4	6	305.6	18.7	6
1956	1355.2	26.6	2	530.0	7.7	1
1957	1365.7	37.5	3	590.9	34.5	6
1958	1415.8	43.2	3	715.4	41.9	6
1959	1793.3	58.0	3	894.0	42.7	5
1960	2508.0			1227.6	41.9	3
1961	2857.3	88.5	3	1421.1	72	5
1962	3272.9	133.9	4	1571.8	108	7
1963	4974.3	123.4	2	2190.4	116.6	5
1964	4148.7	179.6	4	2329.6	145.9	6
1965	4382.5	169.8	4	2807.2	192.0	7
1966	4981.6	223.3	4	3034.3	219.5	7
1967	6451.2	254.9	4	3941.7	222.6	6
1968	6783.5	307.7	5	5712.2	268.3	5
1969	9269.1	344.4	4	7107.8	274.1	4
1970	11264.0	442.4	4	8204.0	330.3	4
1971	15789.7	445.9	3	11119.7	404.2	4
1972	18543.7	627.7	3	11946.9	330.3	3
1973	19802.2	600.5	3	12264.3	488.2	4
1974		584.9		10336.2	534	5
1975	16976.7	884.9	5	15024.9	736.6	5
1976	17496.4	698.3	4	15349.5	654.1	4
1977	13537.2	441.6	3	15022.8	834.5	5
1978	12544.6	680.9	5	16046.6	1133.6	7
1979	18521.8	649.9	4			
1980	17551	276	2	15073	646	4
1981	20374	1024	5	21689	1345	6
1982	20516	759	4	21817	1069	5
1983	19397	341	2	22512	977	4
1984	19443	508	3	25030	1301	5
1985	28499	404	1	27917	1188	4
1986	25517	-78	0	30347	843	3
1987	30256	613	1	39471	1677	4
1988	32250	271	0	40260	1148	3

Notes: Sources are Prime Minister's Office, Statistical Bureau,Japan Statistical Yearbook, various years; Economic Planning Agency, Monthly Economic Statistics, various years.
% Government refers to the share of government loan's among all new loan's,and the sum of loans made by the Japan Development Bank (JDB) and Export-Import Bank, the two principle government banks lending to large business firms.
%JDB is the Japan Development Bank's share of new equipment loans. The Export-Import Bank does not function in this area.
Loans made by the Small and Fishery Financy Corporation, and, after 1968, the Environmental Sanitation Finance Corporation are ommitted from our figures although they are reported as "industrial" loans in government data series espite the fact that farmers and small businesses are loan recipients

Table4

Table 4. Government Bank Lending Priorities and Industry Loan Dependency Ratios Indicate that Priorities Followed "Infrastructure" Needs Rather than Consistently Targeting Growth Industries

	1950s	1960s	1970s
Japan Development Bank Loans and Their Composition			
Electric Power	$595.7 (44%)	$584.1 (12%)	$3,466.8 (12%)
Shipping	$371.3 (27%)	$1,606.6 (33%)	$2,791.9 (33%)
Coal	$99.9 (7%)	$301.0 (6%)	--
Iron and Steel	$58.9 (4%)	$15.6 (-)	--
Computers and Electronics	--	$87.5 (2%)	$1,456.1 (6%)
Total Loans	$1,363.5 (100%)	$4,886.9 (100%)	$22,944.0 (100%)
Japan Development Bank Loans as a Share of All Loans			
Electric Power	55.4%	52.2%	NA
Shipping	48.6%	59.9%	44.3%
Coal	24.6%	33.8%	--
Iron and Steel	12.2%	1.4%	3.8%
Electric Machinery	.3%	.6%	.8%

Note: Sources are Nihon Kaihatsu Ginko (Japan Development Bank), Nihon Kaihatsu Ginko 25 nenshi (tokyo: 1982), Appendix,p.42-49, and Nihon Ginko, Kenzai Tokei Nenkan, various years.

Figures in upper half of table are US$1 million. Percentages in upper half of table are sharesof JDB loans to specific industries.

Percentages in lower half of table are shares of loans to specific industries accounted for by JDB loans. N A means " not available", and refers to situations where total loan and JDB loan aggregates are not comparable.

Table5

Table 5. Industrial Concentration per Square Kilometer Is Greater in Japan than Other Advanced Countries

	G.N.P. (10 $U.S.)	Industrial Output (10 $U.S.)	Energy Consumption (10 TEP)	Numbers of Cars
Japan	6.05	1.93	0.12	303
United States	0.32	0.08	0.36	26
United Kingdom	1.04	0.25	1.00	72
France	0.87	--	0.47	47
Italy	0.81	0.20	0.66	72
Sweden	1.67	0.37	1.09	65
Netherlands	3.10	0.58	2.58	138

Source: Data are from the OECD.

Table6

Table 6. The Japanise Government Supported Farmers and Small Businesses as well as Large Industries (in billion of yen)

	Farmers				Small Businesses			"Basic Indutry"
	Programs	Price Supports	Loans	Total	Programs	Loans	Total	Total Government Loans
1955	44.9	6.7	26.5	78.1	2.5	24.4	26.9	44.9
1956	40.8	3.3	23.9	67.2	.7	30.4	31.1	45.1
1957	39.9	31.0	24.6	95.5	1.9	67.1	69.0	80.2
1958	44.0	2.8	36.6	83.4	1.5	62.1	63.6	90.0
1959	54.4	2.5	48.3	105.2	2.4	79.2	81.6	88.3
1960	87.9	32.1	43.8	163.0	2.3	77.5	99.3	83.8
1961	133.0	69.5	53.4	255.9	4.3	113.8	118.1	88.8
1962	142.3	70.3	53.3	265.9	6.3	131.3	137.6	120.8
1963	157.3	75.7	68.9	301.9	8.4	149.9	158.3	128.2
1964	193.8	1.8.0	81.4	383.2	9.3	185.3	194.6	124.9
1965	220.6	131.9B	103.3	469.4	9.9	204.5	214.4	158.1
1966	138.3	215.0	127.2	480.5	26.9	227.4	254.3	161.1
1967	145.2B	249.1B	147.3	541.6	35.0B	344.6	379.6	164.8
1968	171.4	279.0	158.7	609.1	36.9	400.8	437.7	183.7
1969	162.4	353.0	181.3	696.7	42.8	473.9	516.7	187.7
1970	189.8	488.4	178.5	856.7	49.9	552.3	602.2	216.5
1971	247.5	474.8	216.4	938.7	65.2	658.4	617.5	229.9
1972	316.4	529.7	270.0	1116.1	77.8	842.4	920.2	264.1
1973	325.9	815.6	316.7	1458.2	79.0	1025.0	1104.0	246.0
1974	356.0	992.8	324.1	1672.9	102.1	1227.5	1329.6	241.5
1975	426.1	914.6	379.5	1720.2	124.6	1450.5	1575.1	276.4
1976	468.3	992.7	515.2	1968.2	144.6	1760.4	1905.0	299.6
1977	637.1	824.9	616.8	2078.8	191.0	2098.7	2289.7	347.1
1978	775.5	934.1	721.5	2431.1	226.5	2392.2	2618.7	408.3
1979	857.9	1070.5	852.8	2781.2	227.0	2907.3	3134.3	472.8
1980	897.5	955.6	885.9	2739	243.5	3400.4	3643.9	547.3
1981	899.7	994.8	916.6	2811.1	249.7	3825.2	4074.9	593.6
1982	904.0	1004.0	907.0	2815.0	240.0	3906.0	4146.0	636.0
1983	898.7	914.6	963	2776.3	233.5	3942	4175.5	626.0
1984	893.3	796.9	1035	2725.2	226.4	3968	4194.3	620
1985	879.0	694.0	891	2464	210.1	3764	3974.1	603
1986	888.7	610.9	902	2401.6	220.7	3700	3920.7	636
1987	957.7	687.6	908	2553.3	260.1	3986	4246.1	631
1988	854.5	477.5	979	2311	254.0	4031	4285.0	687
1989	867.8	459.2	924	2251	240.5	4176	4416.5	759
1990	869.6	395.2	876	2140.8	194.3	4338	4532.3	797

Source: Prime Minister's Office, Statistics Department, Japan Statical Yearbook, various years; Nakamura, The Postwar Japanese Economy,p. 137 Figures for loans of government financial organs affiliated with the fiscal Investment and Loan Program. "programs" refers to budget allocations

Table7

Table 7. Japan Development Bank Lending Was Heaviest in Recessed Industries				
	JDB Loans	% Industry Borrowing	JDB Loans: Output	JDB Loans: Value Added
Transport Eqpt.				
1960	3	1	.8	1.5
1965	15	2	5.8	16.6
1970	43	2	5.8	17.7
1975	82	2	5.6	19.0
1980	82	2	3.3	12.3
1985	48	1	1.3	4.9
Electric Eqpt.				
1960	1	0	.6	1.5
1965	5	1	1.9	5.1
1970	17	2	2.3	5.8
1975	20	1	1.8	4.7
1980	31	1	1.4	3.5
1985	106	2	2.6	7.3
Iron and Steel				
1960	10	2	5.8	24.8
1965	12	1	4.6	19.4
1970	25	1	3.8	14.6
1975	111	3	9.8	44.1
1980	251	6	14.0	47.8
1985	306	5	17.2	58.9
Chemicals				
1960	17	3	12.9	34.2
1965	50	5	19.5	47.5
1970	106	5	19.1	53.6
1975	227	6	21.7	61.0
1980	242	5	13.5	40.0
1985	293	5	14.3	36.8
Non-Ferrous metals				
1960	1	0	1.1	4.4
1965	4	1	3.4	16.5
1970	22	4	7.2	33.9
1975	84	6	21.4	96.3
1980	63	3	7.7	32.3
1985	88	3	13.8	56.2

Source: Prime Minister's Office, Japan Statistical Yearbook, various years.
JDB (japan Development Bank) loans are stated in billion of yen.
% Industry Borrowing is the share of all outstanding loans accounted for by JDB loans.
JDB Loans: Output is the amount of JDB loans in millions of yen needed to generate one billion yen of ouitput.
JDB Loans: Valued Added is the amount of JDB loans in millions of yen needed to generete one billion yen of value added. (Value added is the difference between the cost of inputs including labor and the value of production.)

Table8

Table 8. Support for LDP Clients in the Postwar Era Generally Fails to Reflect Political Crises

	Real GNP Growth %	LDP Election Declines %	Budget Shares Public Works %	Agriculture %	Welfare	FILP Lending Agriculture %	Small Business %	Growth Profiles Budgets PW AG SW FILP SBL
1955	8.8	3.5	14	5	14	9	8	
1956	7.3		13	4	13	7	9	
1957	7.5		14	6	12	6	17	
1958	5.6	2.7	14	4	12	7	15	
1959	8.9		17	8	13	9	14	
1960	13.3	3.4	17	12	13	7	13	
1961	14.5		18	10	15	6	14	
1962	7.0		18	9	14	6	14	
1963	10.5	.9	18	10	15	6	12	
1964	13.1		18	11	16	6	13	
1965	-		19	9	17	6	13	
1966	10.5		19	8	16	6	13	
1967	10.4	5.1	18	8	16	6	14	
1968	12.5		19	8	14	6	14	
1969	12.1	1.5	18	7	14	6	15	
1970	9.5		18	8	14	5	15	
1971	4.3		20	8	14	5	15	
1972	8.5	1.0	22	7	14	5	15	
1973	7.9		17	8	15	5	15	
1974	-1.4		16	7	16	4	16	
1975	2.7		17	6	20	4	16	
1976	4.8	4.4	17	6	20	5	17	
1977	5.3		17	5	20	4	15	
1978	5.2		17	5	19	5	16	
1979	5.3	(2.0)	17	5	19	5	16	
1980	4.3	(1.9)	16	4	19	4	16	
1981	3.7		15	4	19	4	16	
1982	3.1		14	4	18	4	16	
1983	3.2	2.6	13	4	18	4	16	
1984	5.1		13	3	19	4	16	
1985	4.9		13	3	19	4	18	
1986	2.5	(6.0)	11	3	21	4	17	
1987	4.6		11	2	20	3	15	
1988	5.7		9	2	21	3	14	
1989			9	2	24	3	13	

Sources: Same as Table 6.

Table9

Table 9. Japan Dismantle Much of its Government Support for Industry Beginning in the 1960s

Year	FILP Loans to Industry %	Tax Losses from Incentives %	Import Quotas	Import Tarifs %	Cartels Small Business	Cartels Other
1955	20.2				89	14
1956	21.4					
1957	15.7					
1958	13.4				273	177
1959	10.7					
1960	12.7					
1961	10.6					
1962	8.5		466			
1963	8.9		197	7.3		
1964	7.8		136	7.7	556	354
1965	6.6		122	7.3		
1966	6.6		126	7.1		
1967	5.9	7.4	121	7.1	572	431
1968	5.7	6.9	118	6.9		
1969	5.4	7.0	90	6.6		
1970	4.7	7.4	33	6.3		
1971	3.5	7.9	32	5.0	439	406
1972	3.0	9.0	31	2.7	604	372
1973	3.0	6.4	30	2.9	607	372
1974	2.8	5.4	27	3.3	591	317
1975	2.4	5.0		3.3	511	277
1976	2.9	5.1		4.1	395	259
1977	2.6	3.9		3.1	279	249
1978	2.6	2.6		3.5	290	245
1979	2.6	3.4	22	2.5	274	232
1980	3.0	2.2		2.5	267	224
1981	3.0	1.9		2.5		
1982	3.0	1.8		2.7		
1983	3.0	2.7		2.5		
1984	3.0			2.6		
1985	3.0			2.7		
1986	3.0			3.3		
1987	2.0			3.4		
1988	2.0			3.4		

Sources:FILP loan percentages are the share of loans to industry (industry and technology in the 1980s) in total FILP loans. The Sources are Nakamura: The Postwar Japanese Economy. Tokyo, University of Tokyo Press. 1983,p. 137;Prime Minister's Office, Statistics Bureau: Japan Statistical Yearbook, various years; Japan Economic Institute Report series, various number Tax data are percentage losses from total corporate taxes due to special tax exemptions for industrial development,and are from unpublished Ministry of Finance data. Information on import quotas is raw numbers. Sources are Ministry of Internaci onal Trade and Industry, unpublished Ministry of Finance figures and Keizai Koho Center: Japan An Internacional Comparisor various years. Cartel information is raw numbers from Kosei Torihiki Linkai:Kosei Torijhiki Nempo Hokoku,various years. Before 1971 figures are averages for 1953-55,1956-60, 1961-65 and 1966-70 respectively.

Figure1

Figure 1. Japan Had Economic Plans and "Framework" Legislation

Early Postwar Economic Plans

Plan	Years	Goals
5 Year Plan for Economic Self Support	1950-60	Economic self-sufficiency via balanced trade, stable prices, full employment
New Long Range Economic Plan	1958-6	Strengthen industrial base, stable high growth, full employment
National Income Doubling Plan	1961-70	Expanded, stable growth/living standars, improvement in social capital
Medium Term Economic Plan	1964-68	Improve small firm efficiency, improve technology, improve life quality
Economic and Social Development Plan	1967-71	Balanced social/economic development, improved social infrastructure

Major "Framework" Programs and Legislation

Law/Program	Date	Goals
Foreign Exchange and Trade the Control Law	1949	Rationed foreing exchange for imports using a quota and licensing system
Foreing Capital Law	1950	Limited foreing investment in Japanese industries
1st-3rd Steel Plans	1951ff	Promoted technological modernization of steel industry
Enterprise Rationalization Promotion Law	1952	Tax, incentives, loans and other supports to be given modernizing firms
5 Year Plan for Synthetic Fiber Development	1953	Ditto
5 Year Petroleum Resources Dev't. Plan	1954	Established joint public-private company to develop new oil sites
Coal Mining Industry Temporary Prom. Law	1955	Encouraged lowering of coal cost via purchase of old mines, new equipment subsidies, legimatizacion of some cartels, other help
Petrochemical Promotion Plan	1955	Sales of military fuel storage facilities plus rationalization support
Machine Industry Temporary Promotion Law	1956	Framework for industry level rationalization programs
15 Year Auto Parts Rationalization Plan	1956	Provided modernization loans and encouraged concentration of production
Electronic Industry Temporary Promotion Law	1957	Initial efforts to support computer industry development
Basic Machine Tool Industry Promotion Plan	1968	MITI "guidance" for increasing scale of production
Electronic Industry Promotion Law	1969	Provided a "rationalization" fram,ework for electronic industry
Special Electronic and Machine Industry Law	1971	Government subsidied computer leasing started, computer controlled machine tools promoted
Spec'1. Information and Machine Indust. Law	1978	Computer industry superproject

Source: Japan Institute of International Affairs: White papers of Japan: 1972-73. Tokyo, 1974, p. 275-382; Tsushnanso: Tsusansho 25 gonenshi. Tokyo, 79

Figure2

Figure 2. Industrial Policy Frameworks Vis-a-Vis the computer Industry Were Accompainied by Extensive Policy Instrumentation

Major Policy Framework:	Electronics Industry Promotion Special Measures Law -1957	Electronics and Machine Industry Information and Machinery Industry Special Measures Law -1971	Special Measure Law -1978
New Institutions:	MITI Electronics Indutry Div. Electronics Industry AG Japan Elect. Computer Co. (JECC) Japan Information Processing Ctr.	Electronics and Machine Industry AG	
JDB Loans:	Support for new firms Support for JECC	Loans for startup, specialization, cost reduction, expanded output Support for JECC	Software development JECC loans
Tax Incentives:	AD for computer purchases EX for R & D Reverses Computer Repurchase Reverses EX Data engineers training cost EX	NMC Machinery AD New industrial technology AD Computer Repurchase Reserves EX Software Development Reserves EX Local Tax on Computers EX Tax incentives for mergers	Computer Repurchase Reverses EX
Protection:	Mainframe computer quotas High tariffs Foreign Investment Limits NTT domestic maker purchases	Mainframe computer quotas High tariffs Foreign Investment Limits NTT domestic maker purchases	Mainframe Import "Guidance" High Tariffs until 1980 NTT domestic maker purchases
"Structure":	AML exemption for computers Peripherals makers cartels	Specialization Urged Guidance re standars, technology	NC Machine Cartels Promoted
Research & Dev't:	Computer research subsidies Public-private research projects	Computer research subsidies Large scale research projects	"State of art" projects "Superprojects"

Notes:
AG= advisory group AD=accelerated depreciation EX= exemption from tax NC = numerically controlled
NTT = Nippon Telephone and Telegraph AML=Anti-Monopoly Law

Source is Anchordoguy: Computers Incorporated. Cambridge, Harvard University Press,1989 and Kaplan: Japan the Government-Business Relationship. Washintong. Wasintong, DC U. S, Government Printing Office,1972.

Figure3

Figure 3. There are Several Different Images of Japan's Government's Economic Role

Basic Idea	The Role of the State
The Development State[1]	Japan's economic ministries "nurture" growth in a resource poor, labor abundant economy trough a "mixed" economy strategy of industry "rationalization" and government-business cooperation using government loans and targets tax breaks as incentives and supports
The Societal State [2]	The state works in harmony with other segments of society and derivees its authority from the voluntary cooperation of privateactors in commonly pursued policies deemed in the general interest.
The Market-Conforming [3] State	The state (MITI) promotes policies which encourage firms to develop and compete in accordance wich market conditions; stronger firms are encourage and technological advance is promoted.
The Accomodationist State[4]	State and private jurisdictions and control in particular markets are subject to frequent negotiation; neither the state nor private entities have exclusive jurisdiction; competition for influence is continuous
The Ineffectual State [5]	The State fails to achieve such industrial policy goals as firm consolidation, new entry restriction and inter-firm coordination due to private sector resistence or subvention of government policies.
The Largely Irrevelant [6] State	Competition between firms in a enviroment where high savings and low taxes facilitate investment is the basic source of growth.
The Clientelist State [7]	The LDP led state responds to internal and external political crises by expanded public works outlays and institutional / legal and material supports for traditional clients

[1] Chalmers Johnson: MITI and the Japanese Miracle.Stanford, Stanford University Press, 1982, Chapter 9

[2] Daniel Okimoto: Between MITI and the Market: Japanese Industrial Policy for High Technology. Stanford, Stanford University Press, 1989, p. 226-228

[3] Marie Anchordoguy: Computers Inc.: Japan's Challege to IBM. Cambridge, Harvard University Press , 1989, Chapter 6

[4] Richard Samuels: The Business of the Japanese State. Ithaca, NY, Cornell University Press,1987 p. 8-9

[5] David Friedman: The Misunderstood Miracle: Industrial Development and Political change in Japan. Ithaca, NY, Cornell University Press, Chapters 3 and 6

[6] Hugh Patrick and Henry Rosovsky: Asia'a New Giant: How the Japanese Economy Works. Washintong, DC,Brookings,1976,Chapter 1

[7] Kent Calder: Crisis and Compensation: Public Policy and Political Stability in Japan. Princeton, Princeton University Press,1988

Figure4

Figure 4. State Pluralist Conflicts over Economic Policy Took Different Shapes

Issue	Supporters	Opponents
Coal Priority Production Program (1947-49) (proposed strong state intervention to increase production)	Trade unions,consuming industries, Ministry of commerce and Industry, Economic Stabilization Board, Socialist Party	Most coal producers, Democratic Party (Part),Liberal Party
Petroleum Industry Law (initially proposed strong state role in refining, purchase from overseas and sales)	MITI, LDP/Diet commitee, domestically owned producers	Petroleum Association, Federation of Economic Organitzations, steel firms, electric utilities
Postwar organization of the electric power industry incl. decentralizaed ownership	Mayors' Assn, Prefectural Governors' Assn, Democratic Party, Matsunaga Cmte	Socialist Party, Labor Unions, Osaka Chamber of Commerce Kansai Federation of Economic Organizations, steel industry
Special measures Law for the Promotion of Designated Industries	Keizai Doyukai	Federation of Economic Organizations, Ministry of Finance, National Banking Association, automobile industry, fair Trade Commission
	Proponent	
Coal Rationalization Plan (1955) (State proposed various plans in response to pressure/industry structural change, wanted better productivity and lower prices)	MITI	Large producers, small producers, labor unions,local government, ministry of finance
Propose consolidation of automobile industry	MITI	Automobile industry,especially small firms
Propose consolidation of computer industry	MITI	Computer Industry firms
	Claimant	**Claimant**
Second Coal Program (1964) (State wanted secure supply,less pressure on foreign exchange)	Coal Industry	Utilities
Informal MITI approved steel capacity cartel	Japan Iron and Steel Assn	Sumitomo Steel

Sources: Richard Samuels: The Business of the Japanise State. Ithaca, NY, Cornell University Press, 1987, Chapter 3-5

Chalmers Johnson: MITI and the Japanese Miracle. Stanford, CA, Stanford University Press, 1982, p. 255-260

Eugene Kaplan: Japan: the Government-Business Relationship. Washintong, DC, U.S. Government Printing Office, 1972

Figure5

Figure 5. There were Many Rationales in Economic Policies

	'47 Coal PPP	'55 Coal Rat.	'61 1st Coal Program	'62 Petroleum Ind. Law	Postwar Power Industry Organization
Govenment / Ministry					
Increased Production	X				
Favored Ministry Control	X				
Secure (Domestic) Supply	X	X	X		X
Increased Productivity		X	X		
Conserve Foreign Exchange		X	X		
Strong Domestic Industry				X	
Limit Budget Expenditures			X		
Maintain social stability					
Stable Markets	X				
General Business Views					
Avoid Direct State Control	X			X	
Improve Foreign Image					
Affected Industry views					
Avoid State Control	X	X		X	
Maximize Profits	X	X	X		
Subsidization of Cost	X		X		
Increased Productivity (incl. incentives)					
Subsidies for rationalization		X	X		
Avoidance of Debt/Bankruptcy					
Control of Industry Entry					
Coordination of markets (Prices, Supply, Demand)			X		
Maintain Firm "Integrity"					
Increase Market Share					
Favorable Regulation		X		X	
Views of Product Consumers					
Want Cheap Product / Govt Control of Supply Price	X			X	
Want Subsidy for Use of High cost Inputs			X		X
Trade Reunions					
Want cont'd/ New employement		X			
Nationalization of Producers	X				X
Participation in Management	X		X		
Local Governments/ Regional Interest					
Want local /regional control					
Avoidance of unemployement cost		X			X
Stable Local Economy		X			

Sources: Richard Samuels: The Business of the Japanise State. Ithaca, NY, Cornell University Press, 1987, Chapter 3-5

PPP=Priority Production Plan. Rat. Rationalization Plan

Figure6

Figure 6. Governments Took Multiples Actions Toward Specific Industries in 1952-1982

	Development Frameworks	Rationalization Cartels	Recession Frameworks	Recession Cartels	Market Interventions
Infrastructure Industries					
Electric Power	9				3
Gas	8				4
Nuclear Power	17				
Petroleum	18		4	1	6
Developing Industries					
Aircraft	4				
Automobiles/Parts	3				
Electronics	12			1	1
Machinery	15	1		1	
Developing/Problem					
Industries					
Iron and Steel	10		3	6	12
Chem.Fertilizer	4		3	4	
Non-Ferrous Metals	2		4	1	3
Petrochemicals	4			1	2
Problem Industries					
Cement				2	1
Chemicals			3	4	
Coal	11		37		4
Pulp and Paper			2	1	1
Textiles	3	2	21	9	31
Total	121	4	75	34	69

Source: Tsusansho Nenpo, various years. "Frameworks" are MITI and MITI Advisory Council plans / programs / laws, cartels are MITI sancionated inter-firm agreements and "interventions" are normally MITI actions to set prices

NOTES

(1) JOHNSON, Chalmers: MITI and the Japanese Miracle: The Growth of Industrial Policy, 1925-75. Stanford, Stanford University Press, 1982, chapter 9.

(2) ANCHORDOGUY, Marie: Computers Inc.: Japan's Challenge to IBM. Cambridge, Harvard University Press. 1989, chapter 6. See also OKIMOTO, Daniel: Between MITI and the Market; Japanese Industrial Policy for High Technology. Stanford, Stanford University Press, 1989, p. 226-228, for an interpretation that emphasizes the importance of the societal state, i.e. densely structured interactions between private sector interests and government ministries.

(3) PRESTOWITZ, Clyde: Changing Places: How We Allowed Japan to Take the Lead. NewYork, Basic Books, 1988 and FALLOWS, James: Containing Japan, The Atlantic Monthly 261/1989, p.40-54

(4) SAMUELS, Richard: The Business of the Japanese State: Energy Markets in Comparative and Historical Perspective. Ithaca, NY, Cornell University Press, 1987 is the best example of an interpretation of industrial policy which stresses public-private sector inter-dependency, and, related to this theme, the occasional presence of unintended consequences or even policy failures.
David FRIEDMAN makes somewhat similar comments on the failure of government programs while still seeing the institutional setting as favoring small firm modernization and flexible manufacturing techniques. See The Misunderstood Miracle: Industrial Development and Political Change in Japan. Ithaca, NY, Cornell University Press, chapter 3 and 6.

(5) PATRICK, Hugh and ROSOVSKY, Henry: Asia´s New Giant: How the Japanese Economy Works. Washington, DC, Brookings, 1976, chapter 1. See also TREZISE, Philip H. and SUZUKI, Yukio: Politics, government and Economic Growth in Japan, p. 753-812 in the same volume.

(6) See also CALDER, Kent: Crisis and Compensation: Public Policy and Political Stability in Japan. Princeton, Princeton University Press, 1988.

(7) KEIZAI KOHO CENTER : Japan 1992: an International Comparison. Tokyo, 1992, p.13.

(8) PRIME MINISTER'S OFFICE : Japan Statistical Yearbook. Tokyo, 1989, p.792.

(9) The increase figure was calculated in ye. A sharp increase in the value of the yen relative to the dollar after the 1986 Plaza Accord contributed to the high dollar value of Japan's GDP in recent years. This is the normal point of reference in international comparisons.

(10) Japan's postwar steel output figures no longer reflect the contribution of the large steel mills in the northern Chinese region of Manchuria which Japan had built in the years after 1931 but lost at the end of World War II.

(11) KEIZAI KOHO CENTER : Japan 1981, An International Comparison. Tokyo, 1981, p.20.

(12) KEIZAI KOHO CENTER. Japan 1991, An International Comparison, p. 65.

(13) However, there were precedents for comprehensive industrial production programs during the war and postwar. Occupation period. See JOHNSON, Ch.: op. cit., chapters 3 and 5 and SAMUELS, R.: op. cit., chapters 3-5.

(14) Defense outlays were fairly volatile and ranged as high as 6 percent in the 1950s, during the regime of pro-defense Prime Minister Hatoyama. However, expenditures later stabilized in the vicinity of 1% of the total budget and have remained at that level in most years. Prime Minister Miki (1974-76) formally committed the government not to exceed the one percent level, a commitment which was usually honored, with the exception of the mid-1980s, when personnel expenditures forced the percentage up slightly.

(15) However, Japan was third in the free world after the united States and Germany in per-capita outlays on defense. ALMOND, Gabriel and POWELL, Bingham: Comparative Politics Today: A World View Glenview, IL, Scott, Foresman, 1988, p. 124.

(16) The current national pension plan was started in 1961, and began to mature only in the 1970s and 1980s as contributors reached retirement and drew their pensions. Because of the rapid increase of older persons as a percentage of the population, future pension and health care outlays will place increasing pressure on public expenditures as Japan moves into the 21st century.

(17) Economists have pointed out that in the early postwar era Japanese monetary policymakers raised interest rates only when the economy overheated and demand for imports exceeded the amounts of exports so as to create a negative trade imbalance. See ACKLEY, Gardner and ISHI, Hiromitsu: "Fiscal, Monetary and Related Policies" in PATRICK, H and ROSOVSKY, H.: op. cit., p. 153-247, especially p.161 and 187ff.
In the 1970s a mores conventional monetary policy was followed and interest rates were raised to snub inflationary pressures. Recent liberalization of the financial system has further eroded the Japanese government's capability to independently control interest rates so as to stimulate growth.
There is also controversy over the extent to which the Japanese interest rates were lower in real terms than in other countries. A comparison of U.S. and Japanese rates in the 1970s and 1980s and related policies indicates that real rates were lower in Japan in some periods and higher in other. See LINCOLN, Edward. J.: Japan, Facing Economic Maturity. Washington, DC, Brookings, 1988, p.258-260

(18) WATANABE, Tsunehiko: National Planning and International Growth in Japan in Hickman, Bert (ed)., Quantitative Planning of Economic Policy A Conference of the Social Science Research Council on Economic Stability Washington, DC, Brookings Institution, 1965, p.233-251

(19) Savings deposits in both post office and commercial institutions are exempt from taxation in what is known as the "maruyu" system. Efforts to eliminate this system in the 1980s were not successful. in addition to their tax-free status, individuals can open many small accounts under their own and other names without fear of prosecution.
Henry and Mable Wallich have considered multiple hypotheses about the sources of Japan's high levels of consumer savings and conclude that the semi-annual bonus system, the limited availability of housing credit and the low level of social security were important factors encouraging saving in the early postwar era. They discount most other hypotheses, including the effects of Japan's dual economy / where persons who own small businesses might save as part of their management of their firms). See PATRICK, H. and ROSOVSKY, H.: "Banking and finance", op. cit., p.258-259. However, the Wallich and Wallich interpretation is by now dated. Access to housing credit has increased in recent years, and pensions are more adequate than in the past. After peaking in the mid-1970s, private savings ratios have declined as well, which obviously may reflect these changes in potential needs. See SATO, Kazuo: Savings and Investment in YAMAMURA, Kozo and YASUBA, Yasukichi: The Political Economy of Japan: Vol. 1. The domestic Transformation. Stanford, Stanford University Press, 1987, p.148-151.

(20) KEIZAI KOHO CENTER : Japan 1992, an International Comparison. Tokyo, 1992, p. 85.

(21) JOHNSON, Ch. : op. cit., chapter 9.

(22) Among the scholars who study industrial policy, Marie Anchordoguy is close to the Johnson view that a market conforming state guides important aspects of growth through supportive policies. See ANCHORDOGUY, M. : op. cit.

(23) PATRICK, Hugh and ROSOVSKY, Henry : Japan's Economic Performance: An Overview in PATRICK, H. and ROSOVSKY, H. : op. cit., p. 6-62 especially p. 47-48.

(24) FRIEDMAN, D. : op. cit.

(25) At some point this view is accompanied by a corporatist interpretation of interest group politics. See Chapter 6 and WADE, Robert: Governing the Market Economic Theory and the Role of Government in East Asian Industrialization. Princeton, Princeton University Press, 1990, p. 27.

(26) SAMUELS, R.: op. cit., p. 95-102. We exaggerate the simplicity of real-world policy processes in figure 4. Although the patterns we induce are clearly present, alignments and issues in many policy processes are seldom confined to a single pattern. Instead, it is more common to seen a series policy stages in which different aspects of the main issue are negotiated, and in which different elements of the pro- and contra- coalitions play major roles. Movement from sub-issue to sub-issue, negotiation and re-negotiation and emergence of different actors as dominant players in different policy stages is common. the stages of policymaking as initiation, drafting, debate/ negotiation and decision would indicate. Even paradigms which describe policymaking in terms of bureaucratic, party, cabinet and Diet stages fail to capture the frequent reversals of movement and arena overlaps common to real-world policymaking.

(27) SAMUELS, R. : op. cit., p. 108-112.

(28) See, for example, the discussions of the processes leading to the first Coal Program as related in SAMUELS, R. : op. cit., p. 113-116. In several other major postwar energy policy decisions, the state actually ratified decisions made within private sector policy bodies such as Federation of Economic Organization committees.

(29) See also FUKUI, Haruhiro: Economic Planning in Postwar Japan: A Case Study in Policy Making in Asian Survey. 12 April/1972, p. 327-348. Journalistic accounts of economic policymaking also document the presence of political party and business sector inputs to macro-economic policy design.
Since Samuels work deals with energy industries, the extent to which this industry is atypical needs to be considered. One of the variables affecting the shape of energy policy bahavior is the consumer- producer cleavage; it may be that policy arenas lacking this basis for disagreement display different patterns of conflict. also, political controversy may be greater in a declining industry like coal (one of Samuels three cases) than in the case of infant industries. Indeed, whether industries face development or decline, are healthy or recessed or are dominated by a few large firms vs. many small companies all may be very relevant to the degree of conflict and acceptance or rejection of government programs. Perhaps Samuel´s biggest contribution is to point out that firms respond to government on the basis of their own interest. this otherwise obvious element of firm behavior is generally ignored by advocates of the dominant bureaucracy-developmental state hypothesis.

(30) Examples are drawn from SAMUELS, R.: op. cit., chapter 3-6.

(31) LONG: The Local Community as an Ecology of Games. American Journal of Sociology 44/1958 p. 251-261.

(32) JAPAN ECONOMIC INSTITUTE: Japan´s Industrial Policies. What Are They, Do They Matter and Are They Different form Those in the united States?. Washington, DC, 1984, p. 41.

(33) JOHNSON, Ch.: op. cit., p. 207ff.

(34) Elsewhere, MAGAZINER, Ira and HOUT, Thomas: Japanese Industrial Policy. London. Policy Studies Institute, 1980 wrote regarding the steel industry that "the greater part of investment capital- roughly 65 percent- was financed by debt, primarily through government institutions although supplemented by private institutions". We show that government lending accounted for just over 12 percent of the steel industry's borrowing in peak periods (Table 4), although we don't dispute the rule of debt in general.

(35) See also OGURA, Seritsu and YOSHINO, Naoyuki: "The Tax System and the Fiscal Investment and Loan Program" in KOMIYA, Ryutaro, OKUNO, Masahiro and SUZUMURA; Kotaru (ed): Industrial Policy of Japan. San Diego. CA, Academics Press, 1988, p. 121-123.

(36) The discrepancy between Johnson's figures and our own is apparently due to the misleading inclusion of lending to agriculture and small business in the government's aggregated data on equipment loans. Government equipment loans are normally stated as a total figure which includes lending to small firms and farmers form the People's Finance Corporation, the Medium and Small

Business Finance Corporation, the Environmental Sanitation Finance Corporation (after 1968) and the Agriculture, Forestry and Fishery Finance Corporation as well as loans to large firms from the Japan Development Bank and Export Import Bank. Very large amounts of loans were directed to the small business sector, often for mainly social policy purposes or because of LDP intervention on the behalf of clients. This lending should not be seen as government support of targeted growth industries. See Table 3 sources.

(37) Shipbuilding was also encouraged indirectly by lending to domestic shipping companies which placed orders for new ships, and later by additional funding from the Export-Import Bank for exports of Japanese made ships. Both shipping and shipbuilding needed very large loans to become and stay viable.

(38) In the 1970s , the power industry received substantial JDB loans as part of national efforts to control industrial pollution. See OGURA, S. and YOSHINO, N.: op. cit., p. 145.

(39) KOMIYA, Ryutaro et al. : op. cit., chapter 5 and 16.

(40) MUTOH ;Hiromichi,: "The automotive Industry" in KOMIYA, R.: op. cit., p. 307-332 and OGURA, S. and YOSHINO, N. : op. cit., p. 146-147.

(41) KOMIYA, R. et al. : op. cit., specifically, OGAWA, Seritsu and YOSHINO, Naoyuki: "The Tax system and Fiscal Investment and Loan Program" p. 121-154, YAMAWAKI, Hideki: "The Steel Industry" p. 281-306, and SHINJO, Koji: "The computer Industry" p. 333-368.

(42) JAPAN ECONOMIC INSTITUTE: op. cit., p. 42.

(43) As is well known , there were also close ties between power and shipping industry figures and leading conservative politicians including Shigeru Yoshida, and sizable money contributions from the relevant industry associations. Newspapers in the 1950s carried many accounts of these matters. For example, Mainichi reported on February 4, 1954 that the Electric Industry Management Council and the Shipbuilding Association were the biggest contributors to the Liberal Party during the first six months of 1953, followed closely by the Coal Association. Total 1953 conservative party contributions from power were said to be 22 million yen, a substantial sun for contributions in those times. These figures were from official reports. Elsewhere, Tokyo Nichinichi on June 18 and 20, 1954 described Tagakichi Aso (president of Aso Mining Company and Kyushu Electric Power Company) and Jiro Shirasu (president of Tohoku Power Company) as close confidants of Yoshida.

(44) At the end of each of the first five plan periods nominal GNP was 168, 166, 280, 182 and 156 percent of targeted growth respectively.

(45) FRIEDMAN. D.: op. cit., p. 79-97, and SAMUELS, R.: op. cit., p. 112 and 124.

(46) See "The Rapid Growth Era" in KOMIYA, R. Et al.: op. cit., p. 83.

(47) YAMAKAWA, Hideki: "The Steel Industry" in KOMIYA, R. et. al.: op. cit., p. 302-304. However, Yamakawa also emphasizes the importance of inter-firm competition, stating in conclusion. This was a reflection of the outworking of vigorous investment competition by the individual steel makers....without real competition, such favorable market performance during this period could not have been expected. Yamakawa also criticizes what he feel was MITI´s overemphasis on industry coordination and its concern for large-scale mergers. The former led to inefficient resource allocation in his view while the latter was felt to lead to price discrimination between foreign and domestic markets.

(48) YAMAWAKI, H.: op. cit., p. 302-304. However, despite the 1950s successes, by the 1970s competition (and some say MITI policy) had also produced over-capacity in the steel industry.

(49) MAGAZINER, I. and HOUT. Th.: op. cit., p. 44.

(50) MUTOH, Hiromichi: "The Automotive Industry" in KOMIYA, R. et. al.: op. cit. p. 314. It is possible that automobile firms sought fewer supports than some other industries Industry resistance to MITI

policy promoting inter-firm mergers is well known, and symbolizes the general independence of outlook among some industry firms. Some successful automobile companies such as Honda consistently distance themselves from the government. KAPLAN.: op. cit., p. 120-128. JOHNSON. Ch.: op. cit., p. 24 and conversation with Soichiro Honda.

(51) MUTOH, H.: op. cit. in KOMIYA, R. et. al.: op. cit., p. 323-324.

(52) KAPLAN : op. cit., p. 116-120. However, YOKOKURA, Takashi: Small and Medium Enterprises in KOMIYA, R. et. al.: op. cit., p. 531-534 discounts much medium and small industry policy as being generally unselective, so it is possible that the auto parts efforts were less successful than Kaplan states.

(53) KAPLAN : op. cit., p. 83-86.

(54) ANCHORDOGUY, M.: op. cit. 59-91.

(55) SHINJO, Koji: "The Computer Industry" in KOMIYA R. et. al.: op. cit., especially p. 354-356. Gary Saxenhouse believes that cooperative R and D projects play a role something like inter-firm job mobility in the United States, i. e. diffusion of knowledge across firms. See "Tampering with Comparative Advantage in Japan", Testimony to the United States International Trade Commission, July 13/1983, p. 4.

(56) SAMUELS, R.: op. cit., especially p. 116-134.

(57) Several factors favored the success of the Japanese shipbuilding industry in the early postwar era, in addition to government subsidies to shipowners and later lending for export of ships. Labor cost were low in the Japanese shipbuilding industry in the early postwar era. The cost of steel inputs were also lower than those for European and American competitors in the latter part of the 1950s and later. Capacity and production know-how also existed as the result of pre-war and wartime policies. See, for example, YONEZAWA, Yoshie: "The shipbuilding Industry" in KOMIYA, R. et. al.: op. cit., p. 443.

(58) YONEZAWA, Y.: op. cit., p. 433ff.

(59) GENERAL ACCOUNTING OFFICE: Report to the Chairman, Joint Economic Comittee, United States Congress, Industrial Policy: Case Studies in the Japanese Experience. Washington, DC, 1982, p. 58-68.

(60) According to the Economic Planning Agency, electricity rates are 24 percent higher in Tokyo than in New York, 15 percent higher than in London and nine percent higher than in Paris. See KEIZAI KOHO CENTER : Japan 1992, An International Comparison. p. 74. High costs of imported oil are a major factor in high electric power rates. See SAMUELS, R.: op. cit., p. 183.

(61) HALL, Peter: Governing the Economy: The Politics of State Intervention in Britain and France. New York, Oxford University Press, 1986, especially p. 17-20 and 229-283.

(62) However, given considerable complexity and the need for carefully designed counter-factuals, assessment of the role of these institutional patterns in Japanese economic development must remain tentative.

(63) BRONFENBRENNER, Martin and YASUBA, Yasukichi: "Economic Welfare" in YAMAMURA, K. and YASUBA , Y. (ed): op. cit., p. 138

(64) DENISON, Edward and CHUNG, Willian "Economic Growth and Its Sources" in PATRICK H. And ROSOVSKY, H. (ed) op. cit., p. 116-119.

(65) SATO, K.: op. cit., p. 142.

(66) One well known case, Toyota, had no bank indebtedness by the late 1980s. See KEIZAL, Toyo: Kigyo Keiretsu Soran. Tokyo. Toyo Keizai Shimposha, 1987, p. 362.

(67) LINCOLN, E.J.: op. cit., p. 11.

(68) PECHMAN, Joseph and KAIZUKA, Keimei: "Taxation" in PATRICK. H. and ROSOVSKY, H. (ed): op. cit., p. 317-382.

(69) HAMADA; Koichi and HORIUCHI, Akiyoshi: "The Political Economy of the Financial Market" in YAMAMURA, K. and YASUBA, T.: op. cit., p. 232-235 and 249-250. The Japanese postwar corporate practice of heavy dependence on bank loans declined somewhat after the 1970s.

(70) JOHNSON, Ch.: op. cit., p. 211.

(71) As Edward LINCOLN states regarding the indicative role of the JDB. "This statement could be true....but it remains a piece of unexamined mythology about Japan.... the market for commercial loans is not more than marginally under the control of the Japan Development Bank". Op. cit., p. 41.

(72) NAKAMURA. Takafusa: The Postwar Japanese Economy. Its Development and Structure. Tokyo. University of Tokyo Press. 1981, p. 66.

(73) HADLEY, Eleanor: U.S. Trade Problems with Particular Reference to Japan in HOLLERMAN; Leon (ed.) : Japan and the United States Economic and Political Adversaries. Boulder, CO, Westview, 1980, p. 71; KOMIYA, R. et al.: op. cit., p. 14 NAKAMURA, T.: op. cit., p. 63-74.

(74) FRIEDMAN, D.: op. cit., p. 97-99.

(75) See comments by KOMIYA, Ryutaro and KOSAI, Yukata respectively, in KOMIYA, R. et, al.: op. cit., p. 14 and 26.

(76) The concern for creating market order and higher levels of concentration was the main theme of the "New Industrial Order" policy of the 1960s. This policy has been discussed in many of the sources cited in this chapter. See, for example TSURUTA, Toshimasa: "The Rapid Growth Era" in KOMIYA, R. et. al.: op. cit., p. 63ff.

(77) GALENSON, Walter and ODAKA, Konosuke: "The Japanese Labor Market" in PATRICK, H. ROSOVSKY, H.: op. cit., p. 589ff.

(78) LEVINE, Solomon B: "Labor Conflict" in RICHARDSON , Bradley and UEDA, Taizo (ed): op. cit., p. 48. Lifetime employment is found more in large firms than in Japan's medium and small business sector, and is believed to foster high levels of company loyalty. See GALENSON, W. and ODAKA, K.: op. cit., p. 613-627.

(79) However, growth was to some degree also an essential component of support for Japanese labor practices, as both employment re-structuring during the 1970s recessions and more recent work force curtailment testifies. Maintenance of a permanent labor force was in part dependent on economic growth, or at least maintenance of economic stability.

(80) CALDER, K.: op. cit., p. 314. In some parts of the Japanese economy there are twice as many employees per unit of output or sales as in the United States.

(81) FRIEDMAN, D.: op. cit., chapters 4-6. See also PATRICK. Hugh and ROHLEN, Thomas: "Small Scale Family Enterprises" in YAMAMURA; K, and YASUBA, Y.: op. cit. p. 346-347.

(82) CAVES, Richard and UEKUSA, Masu : "Industrial Organization" in PATRICK H. And ROSOVSKY, H (ed) op. cit., p. 511-513.

(83) KRAUSE and SEKIGUCHI: op. cit., p. 398 state unequivocally the now well accepted view that the domestic economy was the main driver of high growth in the 1950s and 1960s.

(84) MURAKAMI, Yasusuke: "The Japanese Model of Political Economy" in YAMAMURA, K. and YASUBA, Y. (ed) op, cit., p. 74-75.

(85) SAMUELS, R.: op. cit., chapter 2, and KING, Anthony: "Ideas, Institutions and the Policies of Governments: A Comparative Analyses: Parts 1 and 2" in British Journal of Political Science 3, p. 292-302.

(86) While Chalmers Johnson has emphasized that Japan's over 100 special public and semi-public corporations serving transportation, communications and other mostly infra-structural needs make her case unusual, others argue that the American national and state government's direct role in the economy exceeds that of Japan in exactly these areas. See LINCOLN, E.: op. cit., p. 47- 48
In addition, while the Japanese government has promoted substantial investment in the economy through the FILP-linked system of government financial institutions (see Table 7.6) FILP-based loans were not outright subsidies. Government bank loans still had to be repaid. Japanese government orchestrated investment is not the same thing as budget based investments or subsidies for this reason. According to Lincoln, FILP investments are best compared with government general obligation bonds in American practice.

(87) Seventeen percent of Japan's total R and D expenditures were publicly financed in 1989, a sharp contras with the U.S. figure of 46 percent and expenditures of 33%, 49% and 38% respectively for Germany, France and Britain. In the case of the U.S., and perhaps the European countries as well , a major factor in the comparative differences is the inclusion in the general R and D category of figures for defense research, a sector where public outlays were proportionately much greater outside Japan than within that country. KEIZAI KOHO CENTER : Japan 1992, an International Comparison, p. 25.

(88) Even though policymaking affecting business concerns was often pluralistic and pitted some business interests against others, business could still count on the presence of governments which (a) respected private ownership, (b) were committed to economic growth and (c) adopted neo-mercantilist policies in some periods.

(89) CALDER, K. op. cit., p. 197-202.

(90) FLANAGAN, Scott and RICHARSON, Bradley: Japanese Electoral Behavior: Social Cleavages, Social Networks and Partisanship. London, Sage Contemporary Political Sociology Series, 1977, p. 15-18 and WATANUKI, Joji: "Social Structure and Voting Behavior" in FLANAGAN, Scott ; KOKEI, Shinsaku; MIYAKE, Ichiro; RICHARDSON, Bradley and WATANUKI, Joji: The Japanese Voter. New Haven. Yale University Press, 1991, chapter 2.

(91) Obviously, not all countries had the same conflicts or even the same degree of cleavage generated conflict. At the same time, postwar Japan was a much more stable society than inter-war Germany or Italy, and free of the paralyzing labor conflict seen in Britain (and also in Northern Ireland) in the 1970s or the distractions of ethno-linguistic divisions such as exist in Belgium. These differences need to be considered although I would also suggest that social stability is more a desirable than a sufficient factor in economic growth.

(92) DENISON, E. and CHUNG, W.: op. cit., p. 109-111.

(93) See, inter alia. SAMUELS, R.: op.cit., especially p. 111-112 and p. 117 and FRIEDMAN, D.: op. cit., p. 81-84.

(94) SAMUELS, R. op, cit., p. 92 and 102.

(95) Although this may have promoted efficiency in the long run, it is hardly an example of successful industrial policy in the usual sense of the term. See SAMUELS, R.: op. cit., p. 103.

(96) SAMUELS, R.: op, cit. p. 108-112.

(97) SAMUELS, R.: op, cit., p. 103.

(98) YAMAZAWA, Ippei op. cit., 410.

(99) FRIEDMAN, D.: op. cit., p. 81-84.

(100) KAPLAN: op. cit., p. 100-101, 120-128, 141 and 146-147.

(101) KEIZAI KOHO CENTER : Japan 1992, An International Comparison p.88.

(102) FOREIGN PRESS CENTER : Facts and Figures of Japan, Tokyo, 1991, p. 84. In the 1970s figures for other cities included 80 square meters per resident in Stockholm and 464 in Washington, see RICHARDON, B. and FLANAGAN, S.: Politics in Japan. Boston, Little, Brown, 1984, p.409.

(103) RICHARDSON, B. and FLANAGAN, S.: op. cit., p. 410 and KEIZAI KOHO CENTER: op. cit., p. 86.

(104) Average new home prices were 5.6 to 7 times average household income in Japan, as compared with times in the U.S., 4 times in Britain and 4.8 times in Germany. See, for example, JAPAN ECONOMIC INSTITUTE: "Japanese Housing, The International Dimension" in Report 30A. august 4/1989, p.2.

(105) JAPAN INSTITUTE FOR INTERNATIONAL AFFAIRS: White Papers of Japan, 1973-74, Tokyo, 1975, p. 109. Japan's government has been criticized for leaving some land undeveloped in urban centers through its taxation policies. Low taxes on farmland and low inheritance taxes are said to have permitted holding land in the expectation of big future profits without paying high taxes.

(106) The structural recession of the 1970s and government recession policies are discussed in SAXENHOUSE, Gary: "Industrial Restructuring in Japan" in The Journal of Japanese Studies. 5/1979 p. 273-320, and in PECK, Merton J.: LEVIN, Richard C. and GOTO, Akira: "Picking Losers : Public Policy toward Declining Industries in Japan" in Journal of Japanese Studies 13/1987, p. 79-123.

(107) In any given year, eighty percent of the cartels listed in Fair Trade Commission reports are in the medium and small business and health and sanitation (also small business) categories. In contrast, agreements listed as rationalization (modernization) cartels are comparatively few. Unfortunately, breakdowns indicating the purpose of the more numerous small business cartels are not usually available. See, for example, IINKAI, Kosei Torihiki: Nempo Hokoku, 1990.

(108) Occasionally even successful industries borrowed in ways which increased their dependence on government loans, but this was a reflection of decisions to dramatically increase capacity rather than a symbol of problems.

(109) "Holistic" cultural may also encourage support of weak economic sectors or other manifestations of equity. Holism is visible in the debates over tax reform. A conservative view that full employment is an appropriate social welfare strategy further motivates the same kind of policy preferences. But normative concerns are hard to separate from politically derived motivations in this case.

(110) CALDER, R.: op. cit., especially chapter 11. See also WOODALL, Brian E. : "Pork Barrel Politics in Japan: Trade Friction, Public Works and the Triadic Syndicate, 1995-1998", unpublished PhD. dissertation, University of California, Berkeley, 1990.

(111) Incrementalism pertains to routine budgetary processes whereby annual new allocations for a particular kind of activity are based on incremental additions to the past year's allocation. See CAMPBELL, John: Contemporary Japanese Budget Politics. Berkeley, University of California Press, 1977, p. 16, for discussion of the Japanese concept of cross-sectoral balance in budget allocations, which may itself reinforce an incrementalist tendency.

(112) KOBAYASHI, Nobayashi: "The Small and Medium- Size Enterprise Organization Law", in ITO, Hiroshi (ed.): Japanese Politics, An Inside View, Ithaca, NY, Cornell University Press, 1973, p.50-51.

(113) Diminishment of Calder's contribution is not my intention. His evidence and arguments are vastly richer than our own treatment. At the same time, our calculations offer new perspectives on the crises and compensation hypothesis. Ultimate proof of the crisis model would require much more analysis of LDP decisions making processes than has been carried out thus far. Many plausible alternative explanations for policy developments to the crisis idea were not explored by Calder. Revenue availability, elite ideological preferences, the evolution of new needs as the country underwent enormous changes thorough high growth and Keynesian responses to economic downturns all suggest themselves as explanations for policy trends in competition with the crisis model.

(114) In his review of policies for the aging, John Campbell concludes than both health insurance an pension reforms were more the work of Ministry of Health and Welfare bureaucrats than responses by the LDP. See How Policies Change: The Japanese Government and the Aging Society. Princenton, Princenton University Press, 1992, chapters 9 and 10.

(115) Trade figures refer to exports. KINENKAI, Yano Tsuneta: Nihon Kokusei Zue. Tokyo, 1980, p. 140 and 171 and KEIZAI KOHO CENTER : Japan 1992: An International Comparison, p. 34.

(116) Since the early 1970s farmers joined the ranks of industries, such as textiles automobiles and computers, which in the past opposed liberalization.

(117) Customs duty ratios for Japan dipped Below those for the U.S. and EEC as early as 974, and were lower than the U.S. but slightly higher than the EEC from 1976-79. They once again became lower than both the U.S. and EEC form 1980 on. differences between the three are not very great: U.S. tariff duties now average 3.9. percent of imports, those for the EEC are 3.8 percent and Japan's duties average 3.4 percent. See KEIZAI KOHO CENTER: op. cit., p. 31.
Usually tariffs and barriers to foreign investment were reduced only after industries were competitive. High tariffs for a few products still exist and are concealed within the overall figures which are averages.

(118) Liberal economics allows for a governmental remedial role in market failures, but provides no precise indicator to suggest when governmental programs are actually desirable or when they lead to a waste of resources. See WADE, R.: op. cit., p. 11.

(119) MAGAZINER; I. and HOUT, Th.: op, cit., p. 15-16.

(120) The importance of conformity to market trends is stressed by JOHNSON, Ch. in op, cit., p. 317-318 and by ACHORDOGUY, Marie, op. cit., chapter 1.

(121) Information was also gathered in a less technocratically ideal process form contacts with firms which wanted something from government.