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THE POSTWAR ECONOMIC HISTORY OF JAPAN

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This essay treats Japan's economic history for the almost three decades following the restoration of independence in spring 1952. Japan's postwar economy is based on the competitive market, private enterprise system. Most businesses are privately owned, workers find jobs and are hired on a private, voluntary basis, and (mainly) private demand for goods and services determines what will be produced and at what prices. The government's main role in the economy is indirect: to set the rules, to help shape incentives for producers and workers, and to influence the general environment within which the economy operates.

Despite problems and difficulties, the basic theme for this period is one of outstanding success. The rapidity and duration of economic growth has been unprecedented, transforming the fragile economy of the early 1950s, with productivity and standard of living at developing nation levels, into an immense industrial, urban, affluent society comparable to Western Europe and the United States. The benefits of this process have been widely diffused among the people.

Following sections provide an overview of Japan's economic performance including the sources of growth, trace attendant changes in the economic structure, and consider the evolution of domestic and international economic environment. The final section appraises the benefits and costs of this economic performance, noting problems remaining.

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I. Economic Heritage

The most fundamental economic fact is that Japan is and has long been a populous island nation subsisting in a relatively small geographic area of which only about 15 percent is arable, and with limited amounts of mineral resources most of which have been used up over the past century. In 1952 Japan's population was 85.5 million. The nation's size was 377,420 square kilometers, two-thirds that of France, but about half again as large as the United Kingdom or West Germany. The implication is that, even more than for most nations, Japan's economic progress must be founded on industrialization. Its economic destiny is as a processing nation, importing fuels, minerals, foodstuffs and other land products to support domestic production and consumption, and exporting manufactured goods to pay for these essential imports.

No economy operates in a historical vacuum. While Japan in 1952 had a measured gross national product (GNP) per capita of only $188, below that of such less developed countries as Brazil, Chile and Malaysia, its accumulated economic heritage made its growth potential unusually high. Since opening in 1868 the country had built itself into a major industrial nation, with the attendant creation of economic institutions and a mass educational system.

World War II was disastrous: 2.8 million dead, cities devastated, an empire lost, some two-fifths of the nation's capital stock of buildings and machinery destroyed. It was to take Japan some seventeen years to restore prewar standards of living and levels of productivity. It would take longer to eliminate many of the economic controls instituted during wartime, especially in financial and international trade sectors. Yet war production also developed the skills of workers, engineers, managers, and economic planners.

The postwar Allied Occupation wrought profound institutional and attitudinal changes in economic as well as other spheres, changes which provided a more equal balance of power among workers, farmers, managers, and owners of capital.

The immediate needs for reconstruction and recovery gave a focus to government policy and private behavior of high priority to economic goals, domestically and internationally; the efforts to increase output necessitated sacrifices perhaps more easily acquiesced to in a defeated society. The Korean War was a substantial economic boon to Japan. Through American special procurement and the general expansion of world trade Japan was enabled to earn the foreign exchange to pay for the imports so essential for economic recovery and growth.

Like other low-income countries Japan in the early 1950s had a high proportion of its labor force (more than two-fifths) in agriculture, additional numbers in relatively inefficient small-scale industrial and service enterprises, a small capital stock (machinery, buildings and other facilities) per worker, technological levels that in most industries lagged far behind the West, and as a consequence low labor productivity. Postwar Japan alsoinherited a highly educated and skilled labor force, with formal educational levels comparable to England and above those elsewhere in Europe. The widespread dualism in labor use between small, low-productivity agriculture and family businesses and large, modern industrial firms offered a potential for productivity enhancement by shifting workers. Japan also had substantial entrepreneurial, managerial, organizational, scientific and engineering skills capable of rapidly absorbing and adapting the best foreign technology and developing domestic technologies, and engaging in innovative commercial application. What Japan needed was the capital, access to foreign technology, and a suitable domestic and international environment for economic growth. And these were forthcoming during the next two decades--in large part due to the assiduous efforts of the Japanese themselves.

II. Economic Performance: An Overview

The usual criteria for evaluation of an economy's performance, over time and in comparison with others, include maintenance of price stability and full employment, minimization of cyclical instability and especially recessions, achievement of desired rates of GNP growth, and the improvement in the people's welfare, including the equitable distribution of income, wealth, consumption and other economic benefits as well as their costs of achievement. At times these goals are in conflict. A remarkable feature is that by virtually all criteria Japan's postwar economy has performed extremely well; as discussed below the main areas of poor performance have lain in environmental pollution and degradation, and to some degree in the control of inflation. Though complex interactions have been at work, sustained rapid economic growth has brought about successful achievement of other goals. It has resulted in (as well as being caused by) full employment, only minor and temporary recessions, and a rapidly rising standard of living for virtually all Japanese.

Aggregative dimensions of this performance are summarized in Figure 1 and Table 1. The GNP growth rate averaged 8.4 percent from 1952 through 1978 despite the 1974-75 recession. The economy's size thus increased by about $7\frac{1}{2}$ times, doubling every $8\frac{1}{2}$ years. The economy was subject to cyclical instability but around such a high growth trend that in only the year of the world's most serious postwar recession, 1974, did output actually decrease and then only trivially. The annual rise in consumer prices was generally kept under six percent until the outburst of world inflation in 1973; by 1978 Japan had inflation well under control, at rates substantially lower than the United States or West Europe.

Japan's record of full employment has also been remarkable, especially in comparison with the United States. Differences in statistical definitions and measurements account for only an insignificant share of the explanation. A variety of forces have been at work to maintain full employment. Japan's hiring system gives preference to young new entrants into the labor force; in its homogeneous society there are virtually no unemployed young people seeking work. Overtime is standard; in periods of decreased demand hours are reduced. The permanent employment system, combined with fairly optimistic projections by firms for future labor needs as well as union preference for job security over wage increases in periods of adversity, has meant occasional, temporary periods of excess workers on company payrolls, notably in large firms. The still large number of family-owned farms and small businesses provide a residual source of employment. Employment reduction in the one serious recession, 1974-75, occurred mainly among middleaged married women and older persons; they simply dropped out of the labor force rather than seeking employment or listing themselves as unemployed.

Japan's postwar quarter-century of exceptionally rapid growth was without historical precedent: never had any economy grown so rapidly for so long, especially in per capita terms. The more recent sustained rapid growth of a number of economies--Brazil, Romania, South Korea, Taiwan, among others--suggests the Japanese experience,rather than unique, is one form of the global spread of the industrial revolution begun two centuries ago. Japan was classified as a less developed country until the early 1960s; by the late 1950s it was the second largest borrower from the World Bank. With its accession to membership in OECD in 1964 Japan was recognized as one of the advanced industrial nations. By 1968 with its substantially larger population Japan surpassed West Germany to become the world's third largest economy; by 1973 it passed the United Kingdom in GNP per capita. As Table 1 above and Table 4 later indicate in terms of output, income and socio-economic indicators of welfare Japan is among the half-dozen leading economies of the world. By the end of the 1970s Japan's economy was vastly stronger and both qualitatively and quantitatively different from the early 1950s.

Sources of Economic Growth

Efforts to understand the nature and mechanisms bringing about Japan's very rapid overall growth have resulted in numerous studies of varying degrees of sophistication. They range from lengthy lists of causes without explanation of their relative importance, to highly technical measures of the relative contributions of the domestic supplies of the main economic factors of production, namely labor (of varying education, skill and other attributes), physical capital (inventories, machinery, buildings, other facilities categorized by age, type, and ownership), and natural resources (agricultural and other land, mineral deposits, aquatic resources and the like). The synergistic interrelationships among various causal forces are important but difficult to understand well enough to estimate with any precision. These standard economic factors are considered first; in a later section important features of the general economic environment are discussed.

One well developed methodology is to estimate the direct contribution to increases in the economy's production due separately to the increases in the inputs of labor, capital, and natural resources, using simplifying assumptions which exclude interaction effects among these inputs. Since the amount of natural resources has changed very little, analyses have concentrated on specifying in differing degrees of detail the inputs of labor and capital. This approach makes possible rather precise quantitative estimates of the sources of growth by each input for Japan and in comparison with other industrial countries. Major examples are the studies by Denison and Chung, Christensen, Cummings and Jorgenson, and Jorgenson and Nishimizu cited in the bibliography.

Despite certain technical and methodological differences, several general conclusions obtain from these and other studies. First, no single cause predominates in explaining Japan's rapid growth; both labor and capital inputs grew substantially, and the general environment including government policy was highly supportive.

Second, the growth of GNP has been more rapid than the weighted average of all the measured increases in productive inputs. These inputs explain between 60-75 percent of output growth, but the remaining 25-40 percent cannot be attributed directly to the increases in labor and capital used. This residual is broadly ascribed to technological progress, improvements in economic efficiency. These include a host of factors, such as: new hardware and software technologies derived from basic and applied sciences; improvements in machinery not adequately estimated in measures of capital; better organizational and managerial methods; adaptive and improvement engineering in the production process; and such interaction effects as the ability of better-trained workers to obtain better results from the machinery they use, and the impact of new machineries and methods of production in enhancing the skills of workers.

Third, the growth of the physical capital stock--including machinery, buildings, inventories, roads, and other infrastructure used in the production process,--has been extremely rapid, increasing at some 12-15 percent annually on average. Accordingly, the capital contribution to growth has been larger than in other countries, and greater than labor's contribution.

Fourth, the growth of labor input has nonetheless been significant, since each unit of labor contributes more to output than capital. Total adjusted labor input increased at about $2\frac{1}{2}$ percent annually. This labor contribution has consisted of a variety of elements. The most important has been the rise in employment itself, somewhat above one percent a year, reflecting population growth, changing age distribution, and changing labor force participation rates. In addition the average number of hours worked per week increased despite the reduction in the work week for full-time workers due to the decline in part-time workers. The increasing education and work experience of the typical worker enhanced labor's contribution to output.

Investment and Saving

It is important to go behind these facts of capital and labor growth and technological change to comprehend the more basic forces at work. Consider, for example, the investment which brought about the increase in the capital stock. The predominant share of investment has been by private businesses for productive purposes and by individuals for housing; the government share was modest though nonetheless important in providing substantial transportation, communications, education, and other facilities necessary for private business success. Gross fixed investment, public and private, about 20 percent of GNP in the early 1950s, rose to a peak of 37 percent in 1973 before receding to 31-33 percent in the late 1970s. This was unprecedented in a peacetime, democratic market economy; no previous economy had voluntarily plowed back such a high share of current production into future growth.

Fueling this process was a private business investment boom that lasted for two decades until the 1973 oil crisis. Business entrepreneurial leadership and vision, and their increasingly optimistic expectations, were the key. They were founded on good reasons. With relative low labor costs, tremendous opportunities to innovate in new products and production methods through utilization of foreign and domestic technology, and burgeoning domestic and foreign markets, expansion of production and requisite production facilities was not only highly profitable but virtually essential to stay abreast of one's competitors.

Investment required more than business decisions and domestic and foreign facilities to produce the investment equipment; it had to be matched by saving, and by effective mechanisms for transferring these funds from savers to investors. A significant feature of Japan's growth process is that domestic saving rose along with investment; reliance on foreign borrowing, while important for a few large firms, was inconsequential for the economy as a whole. Business investment was financed in part from retained profits and increasing amounts of depreciation reserves generated by earlier investment. However, business funding needs far exceeded internally generated sources. External sources of funds, in part by issuing stocks and bonds, but mainly by borrowing from banks were the solution. The financial system responded effectively to this business demand for loans. But financial institutions had to have funds to lend; these came from the deposits of individual savers who preferred the safety of banks to other types of financial assets.

The most unusual aspect of Japan's postwar saving performance has been the sharply rising and now very high rate of family personal saving from disposible income. In 1952-54 personal sector saving was six percent of GNP and 25 percent of gross domestic saving; in 1974-76 it equalled 18 percent of GNP and 55 percent of gross saving. The personal sector heterogeneously includes professionals, unincorporated businessmen and farmers in addition to wage earners, each with somewhat different savings behavior. Japanese households have increased their saving rate out of disposable income from present United States levels (about 7 percent) in the 1950s to about 23 percent in the 1970s, substantially above other major nations. The causes of such saving behavior are yet to be fully understood. A number of institutional factors at work include: the high cost of land and housing ownership coupled with underdeveloped mortgage markets; target saving for children's education, marriages, consumer durables, and unanticipated adversities; and an early age of retirement, expanded longevity, and modest retirement benefits.

Labor Force

Japan differed in the early 1950s from developing countries in that it had achieved industrial nation demographic patterns of low birth, death, and population growth rates. Despite an average annual growth rate between 1952 and 1978 of population of only 1.1 percent, and labor force of 1.5 percent, until the early 1960s Japan remained a country of very abundant labor in low productivity uses, readily available to move into higher productivity, higher paying, industrial jobs. (The sectoral changes in labor force distribution are given in Table 3 .) The reallocation of workers among sectors, especially from agriculture, among occupations, and among regions of the country, has been profound. To a considerable degree this mobility has been inter-generational, as young new workers respond to new opportunities. As already noted, Japan's labor force was already highly educated at the beginning of the period; by the late 1970s nine-tenths of the young generation complete senior high school, and about 40 percent continue on for higher education. Japan's labor force is appropriately characterized as hard-working, diligent, intelligent, well trained, and well motivated. While wage rates and labor costs were low in the 1950s, in the late 1970s that is no longer so; both are close to American and European levels.

Technology

The increase in labor productivity (output per worker per year) averaging about seven percent annually was due not only to these improvements in labor quality and utilization, and increasing amounts of machinery and other capital with which to work, but also to a host of technological and organizational improvements that made workers more efficient. These improvements have resulted from effective business and government research and development policies. They combined methods for searching for the best known foreign technologies and an increasingly strong domestic research effort to adapt, improve and make economically competitive imported technology and to develop new domestic products and production processes. Since Japanese firms had requisite managerial, scientific and engineering skills most foreign technology not already in the public domain was purchased through patent and license agreements with American and European firms. Thousands of contracts were signed; this period records the largest and most comprehensive transfer of industrial technology into one country that has ever occurred. The focus was on commercially feasible technologies, rather than for military, space exploration, or other less directly economic purposes. Private industry accordingly has played the major role in the nation's research effort, considerably more so in Japan than elsewhere. Over the years research and development expenditures have increased substantially in absolute amount, with the share in GNP rising from 1.3 percent in 1962 to 1.7 percent in 1976.

As a consequence, Japan has sharply reduced its technological gap with the West on average, and some industries are ahead of the United States. Estimates by Jorgenson and Nishimizu suggest such a rapid improvement in Japanese technology that by the mid-1970s Japan's average technological level was equal to or surpassing the United States, implying that remaining lower Japanese worker productivity is the consequence only of less capital per worker and a far poorer natural resource base. However, the facts that the technological level of firms apparently differs more widely by firm size in Japan, and that such studies inevitably require simplifications in methodology and data, suggest the desirability of some skepticism on specific comparisons while accepting the general point of sharply narrowing technological differences.

III. Changes in Economic Structure

Rapid growth was intertwined with profound transformations of the economy in major dimensions, including the general categories in which GNP was used, the sectoral composition of production, the location of economic activity and people, and the distribution of production between small firms and large.

Table 2 provides evidence on the overall shifts in the way in which GNP was used. The investment boom, increasing its share in the GNP pie, meant inevitably that the share of private consumption would decrease, even though over the period total consumption grew rapidly. Unlike most industrial countries, the government sector share--in provision of services and in public investment activities-- rose scarcely at all. Another major point is the relatively small share of exports and imports, as also shown on a comparative basis in Table 1. The quadrupling of oil prices in 1973-74 raised Japan's import bill significantly which were paid for by an increase in exports. Even so, Japan remains more of a domestically-oriented economy than any European nation. The substantial increase of Japan's share in world markets (see Table 1) has been predominantly a reflection of its overall GNP growth. Export demand, very important for some firms and industries, has taken about one-third of total manufacturing production. For the economy as a whole, almost 90 percent of Japanese production of goods and services has been for the home market.

Distribution of Production and Workers

Striking changes have occurred in the sectoral composition of production and accordingly in the allocation of the labor force, as shown in Table 3. Two major sets of forces were at work, on the demand side and on the supply side. As people's incomes rose, their spending patterns evolved from foodstuffs to light consumer goods to durable consumer goods and to a variety of services--leisure, education, health, finance, and the like. Concomitantly, the integration of local into mass, national markets proceeded apace. Economies of scale brought mass production of consumer durables; mass media, especially television, diffused information and homogenized tastes; higher educational levels expanded awareness; improved transportation lowered costs of reaching markets.

This changing structure of demand brought about, in Japan's private market economy, changes in production in response, both directly and for the needed additions of machinery and other intermediate goods. At the same time wage rates and other production costs were rising, so certain products could no longer be produced at compètitive prices. For example, in manufacturing Japan's comparative advantage in the 1950s lay in the production of textiles and other light consumer goods in which labor-intensive methods were efficient. By the late 1970s labor was no longer so abundant and certainly not cheap; comparative advantage had shifted away from simple labor-intensive goods to industries utilizing higher technologies, more skilled labor, and more capital, such as automobiles, consumer electronics, and steel.

This transformation has been nowhere more apparent than in agriculture. While technically very efficient, agricultural production has become more and more economically inefficient because of high labor costs and minute farm size,still averaging less than three acres. As Table 3 indicates, agriculture now constitutes a small share of total domestic output, and a modest share of the labor force. The flow of workers out of agriculture into higher paying industrial and service jobs has been immense, including virtually all young people. One of the advantages of being a relatively small, populus country is that many rural workers commute to urban jobs; as a result most rural families now derive the majority of their income from non-farm work. Even so, the growth of the rest of the economy has been so rapid that the remaining farm workers continue to be relatively inefficient. To enable them to share in the benefits of industrial growth, and to obtain their votes, the government has since the late 1950's increasingly subsidized selected agricultural products, particularly rice, beef and citrus fruits, through high prices and severe import restrictions. The costs of this income transfer have been borne by consumers and taxpayers.

The growth and changing composition of production has brought about major shifts in population and labor force. Industry and many services tend to concentrate in, and at times create, urban areas. As of 1975, three-quarters of Japan's people live in cities, one-quarter in the seventeen cities with populations over 500,000. About half the labor force and 55 percent of net domestic production were in the three major metropolitan areas sprawled along the Pacific Coast side of the main island Honshu: Tokyo-Kawasaki-Yokohama, Osaka-Kyoto-Kobe, and Nagoya. Japan has become an urban economy and society, with many of the positive and negative agglomeration effects of large cities everywhere.

Industrial Organization

Industrialization and urban concentration do not necessarily imply production concentration in giant companies. Indeed one of the persistent features of the Japanese economy has been the continued importance of relatively small units of production. As of 1977, virtually all workers in agriculture, and four-fifths in construction, wholesale and retail trade, and personal services, and 55 percent of the workers in manufacturing were still in enterprises of less than 100 workers. As of 1975, in the corporate enterprise sector of manufacturing there were 857 companies with more than 1000 employees; they produced 46.1 percent of the sector's gross value added and employed 36.8 percent of its labor force (but less than a quarter of the total labor force in manufacturing due to the importance of unincorporated small producers).

Just as substantial differences in labor productivity have persisted among the sectors of the economy, with agriculture least productive and retail and wholesale trade next so, so too have large productivity differentials persisted within sector by size of firm, even though they narrowed considerably over the period. Thus, in 1975 , as compared with large manufacturing companies (with 1000 plus employees), the average worker in firms with 50 to 99 employees produced only 63 percent (in value added) as much, had only 34 percent as much capital (tangible fixed assets) to work with, and received wages only 64 percent as high. These differentials narrow regularly as firm size increases. This pattern and degree of productivity gap continued on average to be substantially greater in Japan than the United States, though newly industrializing nations appear to have a similar industrial structure. The causes and persistence of this pattern of economic dualism are historical, deep-rooted, and complex. They have reflected greater access by large firms to borrowed funds at lower costs, higher technological levels and ability to engage in technological innovation, better educated and selected workers who subsequently receive more company-specific training, membership of workers in enterprise unions, and hiring, promotion, and wage practices of life-time employment and seniority-based promotion.

In Japan as elsewhere large businesses have substantial economic and political power. In terms of degree of oligopoly, measured by the market share of the largest four or other small number of firms in any given industry Japan displays a pattern very similar to other countries. Concentration occurs in essentially the same industries for reasons of economies of large-scale production and organization, and the overall levels of concentration are about the same. Postwar mergers have somewhat offset Occupation anti-trust actions in specific industries. On the other hand rapid growth, entrance of new firms, and high competition among large firms for market share have tended to offset tendencies toward increased concentration and substantial oligopoly profits. While over the past two decades in Japan as elsewhere there has probably been a modest increase in the degree of concentration of economic power domestically, firms also face greater competitiveness from foreign firms in home as well as world markets.

One feature of Japan's postwar economic history has been the re-emergence of more or less loosely-knit groups of large industrial companies, analogous to conglomerates in Western countries but without centralized ownership and/or control . The most cohesive of these new _keiretsu_ groups are descendents of the major prewar _zaibatsu_, Mitsui, Mitsubishi, and Sumitomo; however, family control was eliminated in the Occupation and stockholding continues to be widely dispersed, though group member firms own in total up to one-third of each other's shares. Other groups, substantially less well integrated, have formed around several major banks or industrial companies. The additional power and economic contribution of such companies through membership in groups have probably not been great, though this remains a somewhat controversial issue difficult to evaluate objectively and empirically.

IV. A Conducive Environment for Economic Growth

The success of any single firm and indeed all participants in the economy depends not only upon their own behavior and actions but on the social and political as well as economic environment within which they operate, domestically and internationally. Here we can only touch upon a number of topics considered in more detail elsewhere. While certain specific features have changed and others remained relatively constant throughout the period, on the whole the environment within which Japan's economy has operated domestically and internationally has been very beneficial to and supportive of sustained rapid economic growth.

Major Continuities

One of the great continuities has been political stability under a government strongly committed to a market-oriented, private enterprise economic system, as much for pragmatic as ideological reasons: the system worked, and worked very well. This has resulted in a basic continuity in policy and in the policy formulation process. It has nonetheless been an activist government, unwilling to leave everything to the equilibrating "invisible hand" of the marketplace, yet using rather than replacing it. Leading this policy process has been an able, elite, career central government bureaucracy confident of its capabilities and ability to define the national interest (though often through the parochial perspectives of each Ministry).

Another great continuity has been the persistence of labor peace, reflected in the absence of sustained strikes, job actions, absenteeism or industrial sabatoge. Much has to do with rapid growth itself which made it desirable for firms to hire and retain workers, but also with the systems of enterprise unionism, lifetime employment, sharing of burgeoning profits through substantial wage increases and semi-annual bonuses, and other institutional arrangements and managerial practices that have provided incentives for both white-collar and blue-collar workers to identify their interests with those of their employer.

Despite profound changes in the international arena certain major continuities persisted. One was the most rapid sustained period of growth the world economy has ever enjoyed, and the even more rapid growth of world trade and capital flows. Japan benefitted from a liberal international economic order, in which trade barriers have continued to be reduced, transportation and communications have improved while costs declined, and foreign technology has generally been available to those with the means to purchase it and capacity to absorb it. Japan's foreign policy, in which economics was certainly the most immediate concern, was founded throughout the period on a broad economic, political, and military security alliance with the United States. Initially a patron-client relationship within which Japan depended upon the United States to champion its re-entry into the major international organizations, as Japan's economic strength multiplied the alliance was gradually transformed into a partnership of increasingly deep importance to the United States and continuing indispensability to Japan.

One consequence of the devastating defeat of World War II and the urgent needs for economic reconstruction was the development of a widespread concensus among virtually elements of Japanese polity and society that priority should be given to restoring and raising the standard of living. It was obvious that this could only be accomplished through growth of economic output. Most, certainly those in power, shared the belief that this could best be achieved by private business but with the help of government. Moreover, attainment of rapid growth seemed to solve all problems at once. It enabled consumption levels to rise, made increasing resources available for investment for future growth, created jobs and increasingly good ones, provided the exports to pay for imports,enhanced Japan's status in the eyes of the world, and enabled politicians to provide benefits to important interest groups--farmers and small businessmen as well as big business. However, this virtually single-minded focus on GNP growth which persisted into the late 1960s ignored the increasingly costly byproducts of the industrial process: urban congestion,increasing pollution, environmental degradation, specific tragedies such as the Minamata mercury poisoning, the lagging provision of public services and amenities (parks, water, sewage systems) and of housing, and what has been termed the "uglification" of cities, national scenic spots, and resort sites. Accordingly the growth concensus and government pro-business policies weakened, and during the 1970s "quality of life" issues became somewhat more important.

The Government's Role

One of the most controversial issues in Japan's postwar economic history is the appraisal of the contribution of government policy to the growth process. The government sector itself remained a relatively small claimant on national production. The policy decision to limit defense expenditures to only 1 percent of GNP has been only part of the explanation. Others have included the delay in provision of public amenities.and in social welfare programs until the mid-1970s. Similarly it is generally accepted that the government's macro planning, in five, seven, or ten year plans, was indicative only; its main effects have been on government investment expenditures and in helping shape optimistic expectations for future economic prospects. Actual performance substantially exceeded the growth targets of each plan between 1956-71, but persistently failed to achieve the targets of the 1970s because of the severity and duration of the 1974-5 recession.

Throughout the period, especially in the 1950s and 1960s, the government used a wide combination of incentives and controls to encourage and channel investment into high priority growth sectors. These included import restrictions which long protected domestic markets for Japanese producers, accelerated depreciation and other fiscal incentives, low-interest rate loans through government financial institutions, licensing of foreign technology contracts, and "administrative guidance" to influence business investment and production decisions. Government ministries have obstrusively kept in virtually daily contact with big business and required immense amounts of information. In general the degree of government control over the economy has been reduced, particularly as foreign trade restrictions have been greatly liberalized to Western levels.

Certainly the government did much to create an environment that has been pro-business in Japan. This has not been unique since similar relationships exist in European countries, yet the atmosphere has been different from the antagonistic government-business relationship often seen as prevailing in the United States. Nonetheless, the relationships among big business, the conservative Liberal-Democratic Party politicians, and the central government bureaucratic elite has been close and in many respects symbiotic. Business finances politics, the political leadership controls the bureaucracy but relies upon it for policy and legislative initiative, retiring senior bureaucrats are hired by business or become politicians. Yet this triumvirate cannot control all policies in what is, after all, an electoral, parliamentary democracy. The power of other interest groups, especially farmers and small businessmen, is reflected in policies for their specific benefit to the cost of others, especially consumers.

One controversial issue is whether the predominant source of the impetus to growth has lain with the government, sometimes referred to in its extreme form as the "Japan, Inc." view of government-business relations, or with private business entrepreneurial and managerial initiative and leadership. A related issue is that of the effectiveness of the government's industrial policy, handled mainly by the Ministry of International Trade and Industry (MITI).

Proponents of the government's leading role argue that government policy has rationally selected and promoted the new industries of the future, while aiding the transfer of labor and capital out of declining industries. Skeptics argue that government support was quite indiscriminate in helping all industries and that the evolution of the industrial structure was due primarily to ordinary private market forces. They point to certain mistakes in the choice of industries selected for promotion such as aircraft or the processing of non-ferrous minerals such as aluminum, and to the prolonged, increasingly expensive subsidization of certain inefficient sectors, especially agriculture, coal mining, and small-scale wholesale and retail trade. In Japan as in other democracies the government is not monolithic and policies are not always well coordinated; no simple evaluation of the government's role in the economy is valid. (My judgment is that the government's role has been positive but often exaggerated.)

The First Phase of Growth

Few in the 1950s anticipated Japan's economic success. The government's 1958-62 plan projecting a 6.5 percent growth rate seemed overly optimistic. The inability to earn or borrow sufficient dollars to pay for needed imports (the balance of payments problem) was correctly perceived as the dominant constraint upon growth. Japan was allowed to behave like other developing nations in imposing severe restrictions on imports and foreign exchange and capital flows for balance of payments reasons, and generally to behave as if its actions had little impact on the rest of the world.

As the economy moved beyond postwar recovery business optimism began to emerge. Actual performance exceeded expectations, and the investment boom of the late 1950s and early 1960s fed upon itself. The annual average growth of GNP accelerated, despite occasional mild slowdowns, from 7.1 percent between 1952-57 to 9.8 percent between 1957-62, and to 10.3 percent for each of the subsequent two five-year periods. Prime Minister Ikeda's 1960 ten-year income doubling plan electrified the popular imagination; in actuality the economy did far better, doubling in seven years. By the mid-1960s Japan had become a prosperous industrial nation with excellent growth prospects; business optimism blossomed. Private demand--investment, consumption, and export--flourished, and monetary-fiscal policy most of the time was directed toward mildly restraining the ebullient economy rather than stimulating it. The recessions of 1957-58, 1962, and 1965 were only slowdowns, not declines, in the growth rate (see Figure 1) and were quickly overcome in a new surge of growth.

Major Turning Points

By the late 1960s sustained economic success had transformed the economy profoundly. Japan was well established as a member of the advanced industrial nations. Private consumption was comfortable and rising for virtually all Japanese. At the same time its very size and its pattern of growth had brought the economy to three major turning points. First, it became widely recognized that the growth pattern was undesirably unbalanced, single-mindedly pursuing GNP while ignoring its costly byproducts and the quality of life generally. Second, highly successful export performance by the manufacturing sector had come to eliminate the balance of payments constraint, despite ever-rising imports of industrial raw materials and foodstuffs as the growth rate increased and import barriers were gradually reduced. Third, the economy had become so large that despite its relatively modest foreign trade sector by domestic quantitative criteria, its impact on the rest of the world, particularly the powerful United States and European nations, was too great not to expect feedbacks and on occasion retaliation; Japan could no longer act as if it were an isolated small country.

The combination of these three turning points did much to shape Japan's economic policies and performance in the 1970s. To these forces were added three more in 1973-74: the oil crisis; intolerably rapid inflation; and the most serious worldwide and domestic recession and stagflation of the postwar period. Japanese suddenly became acutely aware of their interdependence with the world economy and their vulnerability to interruption of essential natural resource imports, notably oil but also foodgrains. The world economic environment was no longer so stable and benign. Economic circumstances had rather suddenly become much more complex than a decade earlier.

As already noted, unbalanced growth had resulted in intolerably high levels of industrial pollution and urban congestion, and insufficient attention to housing, social amenities, and problems of the aged. Increasing public concern resulted in some reshaping of governmental priorities with greater allocation of public and mandated private resources to improving the quality of life, even at some cost in the GNP growth rate. Similarly, as the balance of payments constraint was eliminated, domestic constraints on the growth process became more important: control of inflation; some (exaggerated) concern about increasing scarcity of labor; the narrowing of the technology gap; and following the 1974-5 recession excess productive capacity, a sharp decline in optimistic business expectations and consumer confidence, lowered business investment rates, and inadequate private domestic demand to restore the economy to its full growth potential.

In the 1970s Japan's balance of payments, no longer inhibiting economic growth, instead became the locus of two periods of economic tension with the United States and Western Europe. The now large as well as rapid expansion of Japanese competitive exports, while benefitting Western consumers, adversely affected producers in certain industries. In 1971-72 and again in 1977-78 Japan's exports far outstripped imports and the current account of the balance of payments went into surplus intolerably large to the United States and Europe. Both occurred in periods of considerable difficulty and tension in the world economy. In 1971 the prolonged United States deficit prompted policy steps which brought to an end the Bretton Woods system of fixed foreign exchange rates, and resulted from February 1973 in the floating exchange rate system in which the yen appreciated sharply from its previously fixed rate. In 1977-78 Japanese export competitiveness again affected a number of politically powerful industries in Western nations. The American balanc of payments was in large deficit, the OPEC oil nations continued to run trade surpluses and in 1979 to raise prices even further, and the industrial world economy had still not recovered fully from the 1974 recession.

Thus the 1970s have been a rather troubled period for the Japanese economy. The domestic and international environments have become more complex and less supportive of growth. The oil crisis, quadrupling of oil prices, and continuing fears of oil shortages have had a profound psychological impact on Japanese public and private leaders. The economy endured its worst recession of the postwar period. The growth rate, greatly affected by the recession, slowed sharply to a 4.7 percent rate between 1972-78. The government had to engage in increasingly massive deficit spending between 1976-1979 to generate sufficient domestic demand for the economy to recover and grow. It appears that the annual growth potential of the economy, about 10 percent in the 1960s, had made a downward transition to about 6-7 percent by the end of the 1970s.

Nonetheless, the fundamental lessons of the 1970s are positive. The economy, in facing adversity and vulnerability, has demonstrated it is resiliant, flexible and strong, not weak. It was highly effective in ending the inflation surge of the mid-1970s. Its recession in absolute terms was considerably less severe than in other industrial nations. The quadrupled cost of oil imports, which provide three-quarters of Japan's primary energy consumption, was relatively quickly paid for by export expansion; if anything the economy tended to overshoot in foreign trade while lagging in domestic adjustment.

Indeed these adjustments have made the longer-run transition problems from superfast to merely rapid growth less difficult than might have otherwise been the case. In particular potential difficulties in labor-management relations have been averted, and cost-push inflationary wage increases avoided. Even at 6 percent, Japan's growth rate during the 1970s and projected for the 1980s is more rapid than any other major industrial nation. And 6 percent growth in Japan's trillion dollar economy is much larger absolutely than the 10 percent increases in the smaller economy of the 1960s.

V. The Benefits and Costs of Successful Growth

Japan's approach to its economy is by no means a panacea, and the results by no means a utopia. In historical perspective, it is incontrovertible that the material economic conditions of almost all Japanese have risen immensely in the quarter-century following the end of the Allied Occupation. Inbalances and problem areas remain, but the quality of life of the average Japanese has improved significantly.

Given the complexity of human life, no single welfare index is appropriate. The average standard of living(private consumption per person adjusted for price changes) rose by about 5.4 times between 1952 and 1978. Health care improved substantially. Infant mortality declined, tuberculosis was virtually eliminated as a major killer,and male and female life expectancy has become the highest in the world. Despite high food prices, the quality and diversity of the Japanese diet has increased substantially. Increases in discretionary income, the mass diffusion of consumer durables, and urban living have dramatically altered Jpanese lifestyles.

While housing and provision of most public amenities and services have improved absolutely, demand for them has grown considerably more rapidly, especially in congested large cities of which Tokyo is the most extreme case. The dream of most Japanese to own their own house eventually is not fully congruent with the realities of urban living; city buildings still remain of low average height as many people apparently continue to prefer to commute long distances rather than dwelling in high-rise apartments. Since land prices are extremely high the urban landscape is changing of course. Much urban rental housing is subsidized by companies for their workers, and by the government.

However, in some dimensions industrialization and affluence has created absolutely worsened conditions on a broad scale, even aside from specific locational industry-related tragedies such as the Minamata mercury poisoning, respiratory diseases of Yokkaichi and similar industrial complexes, or cadmium poisoning cases. By the early 1970s pollution--noise, water, and especially air--was both widespread and at high levels. Subsequent strict pollution-control regulations over industrial and automobile emissions have reduced air pollution levels substantially, according to the OECD to levels less severe than in other industrial nations. Pollution and related environmental problems remain far from resolved nonetheless.

Japanese cities, dynamic and exciting, are not beautiful. Massive modern buildings tower over traditionally serene temples, shrines, and parks. Family gardens have been paved over to provide parking for a car, or built upon to provide separate housing for married children. Streets are narrow, spacious boulevards virtually non-existant; land devoted to roads or parks is far less in Japanese than in major Western cities. While public transportation facilities are excellent and relied upon predominately, all modes of urban transportation are heavily congested. As cities have grown commuting times for workers have lengthened. Tokyo, as in many other respects, is most extreme; more than one-fifth of Tokyo's workers commute for more than one hour one way to and from work. Even so Japanese cities are safe, crime-free, and fun to live in.

Improvements in average levels of GNP or consumption per capita say little about how the benefits of growth are distributed. While Japan is by no means a completely egalitarian society, its distribution of income is among the most equal of the industrial nations, comparable to Sweden and substantially more so than the United States or France. Some groups remain relatively less well off: female employees and workers in small firms, the aged, the Korean and _burakumin_ minorities. However, the lot of the disadvantaged has greatly improved both relatively and absolutely. Wage differentials of virtually all types have narrowed over time: by age, sex, education level, occupation, region. Farm families, historically among the poorest in Japan, now have incomes higher than urban families, though more family members work. Japan's affluence is mass-based; pockets of real poverty are few. Of course most Japanese, like most Americans or Europeans, do not perceive of themselves as particularly well off economically even though almost 90 percent consider themselves middle-class.

In Japan as elsewhere the distribution of wealth is considerably less equal than income. High savings rates by almost all Japanese families mean that all have some assets, though inflation has eroded the value of savings deposits. The main wealth beneficiaries of Japan's postwar growth performance have been owners of land, especially in or near urban areas, and of successful businesses. Between 1952 and 1978 the price of urban land went up 72 times, GNP in current prices increased 33 times, average money wages rose by 16 times, and the Tokyo stock price index increased 17 times.

Comparisons of Japan's level of living by the late 1970s with those of other industrial nations is difficult. Consumption patterns differ and prices of goods and services vary, with housing particularly expensive. Foreign exchange rate calculations provide only rough approximations, especially in the case of Japan where goods and services produced for home markets have become considerably more expensive than exports and imports relative to other countries. A Japan-United States comparison of purchasing power shows that per capita consumption in Japan, only 19 percent of the American level in 1952, had reached 54 percent of the doubled American consumption level by 1978. The higher Japan-United States GNP per capita ratio for 1978 of 87 percent (on the exchange rate conversion basis) reflects Japan's greater proportion of investment and higher prices of domestic goods.

A widespread Japanese view is that, after a century of trying, Japan has now essentially "caught up with the West" in socio-economic and technological terms. The data in Table 4 as well as Table 1 support this perception. To many foreigners Japan does indeed appear an affluent, expensive, crime-free, rather polluted, mediocrely housed, congested nation of happy, industrious people who face problems common to those in all industrial nations.

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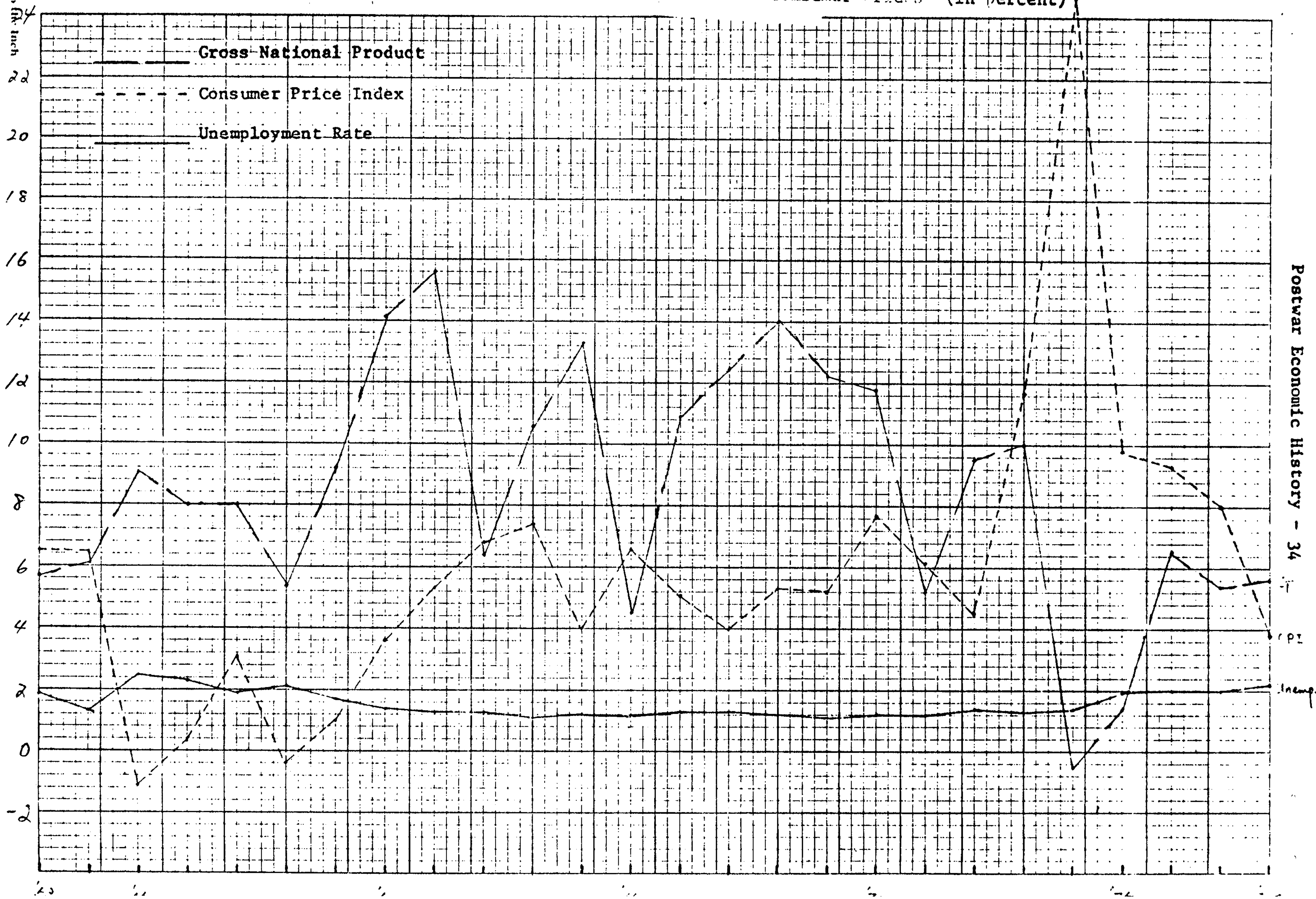
Figure 1. The Unemployment Rate, and Annual Rate of Change of Gross National Product and Consumer Prices (in percent)



10 Squares to the Inch

Figure 1: Basic Data - Annual Rates of Change

	Calendar Real GNP (1)	CPI (2)	Unemployment Ratio (3)
1953	5.7	6.5	1.9
54	6.1	6.5	1.6
55	9.1	-1.1	2.5
56	8.0	0.3	2.3
57	8.0	3.1	1.9
58	5.4	-0.4	2.1
59	9.2	1.0	1.7
1960	14.1	3.6	1.4
61	15.6	5.3	1.3
62	6.4	6.8	1.3
63	10.6	7.4	1.1
64	13.3	3.9	1.2
65	4.5	6.6	1.2
66	10.9	5.1	1.3
67	12.5	4.0	1.3
68	14.0	5.3	1.2
69	12.2	5.2	1.1
1970	11.8	7.7	1.2
71	5.2	6.1	1.2
72	9.5	4.5	1.4
73	10.0	11.7	1.3
74	-0.5	24.5	1.4
75	1.4	11.8	1.9
76	6.5	9.3	2.0
77	5.4	8.0	2.0
78	5.6	3.8	2.2

Sources: (1) Economic Planning Agency, Revised Report on National Income Statistics 1951-57, pp. 82-83; Annual Report on National Accounts 1979, pp. 8-9.

(2) Bank of Japan, Economic Statistics Annual 1978.

(3) Ministry of Labor, White Paper on Labor, various issues.

Table 1

Comparisons of Economic Performance,
Japan and Major Western Countries[a]

Item	Japan	United States	West Germany	United Kingdom	France	Italy
(1) Population (millions)						
1952	85.5	157.0	48.5	50.4	42.5	47.4
1978	114.9	218.5	61.3	55.9[f]	53.3	56.7
(2) Gross national product (billions of current dollars)						
1952	16.3	348.2	31.9	44.3	40.4	17.1
1978	963.5	2,094.4	634.4	307.1	466.7	236.0
(3) Gross national product per capita (current dollars)						
1952	188	2,181	643	870	947	359
1978	8,386	9,588	10,349	5,494	8,756	4,162
(4) Gross domestic investment as percent of gross national prod.						
1952	27.2	17.1	22.8	10.6	18.9	19.5
1977	30.0	15.0	20.9	18.0	22.6	19.8
(5) Government current expenditure as percent of gross national prod.						
1952	10.9	20.1	16.2	19.1	15.9	12.1
1977	22.3	32.6	41.3	41.5[g]	40.4	42.5
(6) Exports and imports[b] as percent of gross national product						
1952	26.6	9.0	31.5	45.1	29.8	25.0
1978	25.8	17.5	52.8	60.9	40.6	48.4
(7) Share of world trade (percent)						
1952	2.2	17.1	5.2	11.0	5.4	2.5
1978	7.4	13.5	10.7	6.2[f]	6.7	4.7
(8) Percent of labor force in agriculture						
Early 1950s[c]	41.7	12.2	23.2	5.1	27.7	32.8
1977	11.6	3.6	6.4	2.5[g]	9.6[h]	14.6
(9) Average annual rate of price change (percent)[d]						
1953-62: Wholesale price index	-0.1	0.9	0.9[e]	0.1[e]	3.4	0.2
Consumer price index	2.8	1.3	1.9	3.0	4.1	2.4
1963-72: Wholesale price index	1.3	2.6	1.6	3.7	3.2	2.7
Consumer price index	5.2	3.5	3.3	5.2	4.3	3.9
1973-78: Wholesale price index	7.1	9.2	5.1	18.1	12.6	19.0
Consumer price index	11.3	8.0	5.1	16.1	13.7	16.4

Table 1: Sources and Notes

Sources: Patrick and Rosovsky, Asia's New Giant: How the Japanese Economy Works (pp. 4-5); OECD, Main Economic Indicators, April 1979; OECD Observor, 1979; International Monetary Fund, International Financial Statistics, May 1979; International Labor Organization, Year Book of Labor Statistics, 1978; UN Demographic Yearbook, 1954.

Notes:

a. It should be noted that not all economic indicators are internationally comparable; for example, the United States classifies as government current expenditures certain items included in gross domestic investment by other nations.
b. Exports and imports of goods and services.
c. Data are for 1950 for the United States and West Germany, 1951 for the United Kingdom and Italy, 1954 for France, and 1955 for Japan.
d. Compound annual rate of growth for the periods indicated.
e. 1954-62
f. 1977
g. 1976
h. 1975

Table 2

Amount and Composition of Gross National Expenditures, 1952, 1966, 1978 (in billion current price dollars, and percent)

	1952		1966		1978	
	Amount	%	Amount	%	Amount	%
Consumption	12.6	72.4	65.7	64.8	659.1	67.0
Private	10.7	61.7	56.5	55.7	565.4	57.5
Government current expenditures	1.9	10.7	9.2	9.1	93.7	9.5
Gross Domestic Investment	4.6	26.6	34.4	33.9	307.1	31.2
Private	3.4	19.1	24.4	24.0	205.0	20.8
Business fixed investment	2.0	11.5	16.2	16.0	133.6	13.6
Housing	0.5	2.6	5.8	5.7	68.1	6.9
Inventory accumulation	0.9	5.0	2.4	2.3	3.3	0.3
Government sector	1.3	7.5	10.0	9.9	102.1	10.4
Fixed investment	1.1	6.3	9.5	9.4	98.3	10.0
Inventory accumulation	0.2	1.2	0.5	0.5	3.8	0.4
Net Foreign Trade Balance	0.2	1.1	1.4	1.4	17.4	1.8
Exports of goods and services	2.2	12.6	11.6	11.4	114.8	11.7
Imports of goods and services	-2.0	-11.5	-10.2	-10.0	-97.4	-9.9
Gross National Expenditures (=GNP)	17.2	(100.0)	101.5	(100)	983.5	(100)

Note: Amounts in dollars are converted at the average prevailing exchange rate of ¥ 360/dollar in 1952 and 1966, and ¥ 209.7/dollar in 1978.

Sources: Economic Planning Agency, Revised Report on National Income Statistics, 1951-1967 (1969); Economic Planning Agency, Japanese Economic Indicators, March 1979.

Table 3

Gross Domestic Product at Current Market Prices and Labor Force,

by Sector 1956 and 1977 (Percent)

	1956		1977		Average Annual Growth Rate (56-77)	
Sector	GDP	(%) Labor Force	GDP	Labor Force	Output	Labor Force
Primary	17.4	41.9	4.9	12.3	8.3	-4.3
Agriculture	12.5	39.3		11.1		-4.5
Forestry	3.2	1.0		0.3		-3.8
Fishing	1.7	1.6		0.9		-1.4
Secondary	34.5	23.9	36.8	34.8	15.4	3.3
Mining	2.2	1.5	0.5	0.2	7.3	-7.1
Manufacturing	27.8	17.7	28.2	25.7	15.1	3.3
Construction	4.5	4.7	8.1	8.9	18.3	4.6
Tertiary	48.1	34.1	58.3	52.9	16.1	3.6
Electricity, Gas	2.1	0.7	2.3	0.7	15.5	1.0
Wholesale and Retail	16.5	13.7	15.7	21.7	14.7	3.6
Transportation, Communications	8.5	4.6	6.4	6.4	13.5	3.0
Banking, Insurance	3.8	1.7	4.8	2.8	16.4	5.2
Real Estate	3.8		9.4	0.7	20.0	
Services	9.8	10.7	11.0	17.1	15.6	3.7
Public Administration	3.7	2.7	8.6	3.5	19.8	2.7

Sources: GDP - Economic Planning Agency <u>Annual Report on National Income Statistics 1972</u>. (pp. 282-283).

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Note: Since output is measured in nominal (current price) terms without adjustment for the effects of inflation, its growth rate is substantially greater than that of real output.

Table 4

Socio-Economic Welfare Indicators, Japan and Major Western Countries

	Japan	United States	United Kingdom	West Germany	France	Italy	Sweden
Infant Mortality Rate[a] 1976	9.3	15.1	14.0	17.4	10.4	19.1	8.3
Life Expectancy at Birth 1976 Male	72.2	68.7[c]	67.8[g]	68.0	69.0[d]	69.0[f]	72.1
Female	77.4	76.5[c]	73.8[g]	74.5	76.9[d]	74.9[f]	77.7
Population per Physician 1975	898	622	559[d]	516	678[e]	502[f]	615[d]
Animal Protein grams per inhabitant per day 1976	35	72	55	65	73	51	71
Full Time School Enrollment age 15-19 % of age group 1977	70.9	72.0[c]	44.6[c]	41.5	54.6	40.8[c]	56.3[b]
Dwelling Completed per 1,000 inhabitants 1977	15.2	6.1	5.9	6.3	10.0	3.2	6.7
Population per car 1976	3.9	1.6	3.5	3.0	3.4	3.2	2.7
Energy Consumption per capita (tons of oil equivalent)	3.08	8.30	3.78	4.25	3.36	2.46	6.09
Telephones per 1,000 inhabitants 1976	426	721	394	344	293	271	689
Newspaper Circulation per 1,000 persons 1975	526[d]	287	388	312	214	113	572
Television Set per 1,000 inhabitants 1975	235	571[d]	320	306	268	213[d]	352
Divorce Rate per 1,000 pop. 1976	1.11	5.02	2.56	2.67	1.27[c]	0.18	2.64

Sources: OECD, Observer, No. 97, 1979.
United Nations, Statistical Year Book, 1977.
United Nations, Demographic Yearbook, 1977.

Notes:
a. Death of infants under one year per 1000 live births.
b. 1976
c. 1975
d. 1974
e. 1973
f. 1972
g. 1970

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