The purpose of this lecture is three-fold: to illustrate macroeconomic development of the post-war Japanese economy; to investigate the contribution of Japan-specific elements of a market system to her development; and to show the needs of adjustments/reforms in the ‘market system Japanese style’ in the post-catch-up-era.

To start with, macroeconomic factors that supported Japan’s strong post-war economic growth, such as high savings and investment ratios, technology progress, and flexible labor supply, will be reviewed. Then, market practices of long-term nature that were often regarded as Japan-specific factors are surveyed. These factors include labor market practices, keiretsu business relations, a main bank system, and business-government relations such as detailed regulations and industrial policies. Long-run macroeconomic policies conducted by Japanese government including the so-called “medium-term economic plans” will be discussed.

The post-World War II Japanese economic development was a catch-up process with industrialized economies. Economic policies and corporate strategies were conducted with this utmost mandate in our minds—to catch-up. This general goal was shared by all economic agents with a national consensus. Macroeconomic policies, particularly monetary policies were conducted in order to provide funds to strategic sectors for economic development. Japanese-style market system(s) functioned fairly well in strengthening international competitiveness of the tradable-goods-producing industries. Although the domestic markets were heavily protected in early stages of Japan’s post-war development, a potential threat of global competition provided incentives for productivity growth as Japanese industries look for export markets. On the other hand, investments in non-tradable sectors were not fully funded. Those sectors were not directly exposed to global competition, either. As a result, development of non-tradable sectors lagged behind. Elements of Japanese post-war development system had a competition-restrictive nature. The system functioned well during her catch-up process.

When the catch-up process was over, however, those competition-restrictive elements turned against ourselves. This part of the story, the lecture on Japan’s ongoing structural reforms, has to be told in full length at another occasion.
Composition of This Lecture

- Macroeconomic Aspects of the Catch-up Process
- Microeconomic Aspects:
  Market System Japanese Style
- Failure to Adjust to Post-catch-up Era:
  Japanese Drive for Structural Reforms
- Evolution and Revolutions in Economic Systems:
  ‘Globalization’ and ‘IT Revolution’
The Japanese economy started to recover quickly from the destruction/destitution of World War II and jumped back to a rapid growth path. Several favorable external/imposed conditions assisted this jumpstart and a sustained rapid economic growth that followed.

First, the post-war economic reforms—the so-called democratization of the economy—had the effects of releasing various economic resources that had been accumulated before the WWII. The reforms included, i) resolution of zaibatsu conglomerates and other measures to prevent concentration of economic power; ii) agricultural reform (incl. land reforms) to produce independent farmers; iii) labor market reform, and iv) introduction of market rules such as the antitrust law and the securities exchange law.

Second, facing the deepening of the cold war, the American occupation strategy changed from ‘getting rid of Japan’s potential to militarize again’ to ‘encouraging rapid industrialization of Japan’.

Third, after the end of the Korean War (1950-53), the Japanese economy fully benefited from the sustained development of the world economy, international trade and investment, and the financial system.

Endogenous factors that enabled high growth included high savings rate, release of younger generation workforce from the agricultural sector, and high productivity growth brought about by the introduction of foreign technology (and ‘improved engineering’).
During the reconstruction phase of the post-war Japanese development, the biggest macroeconomic challenge was a shortage of funds for investment, that is, a shortage of savings. In the early 1950s, household saving rate was around 10% according to SNA, while it was slightly higher in a household survey (over employee households). Like many other developing economies, Japan faced the “saving shortage trap”, that is, a shortage of savings leads to a shortage of industrial fund, that in turn leads to a limited production capacity, to stagnant income, and finally comes back to savings shortage.

In order to cope with this shortage, Japanese government adopted targeting policies and artificially provided fund to key industries of dynamic economic growth rather than relying on a market-oriented fund allocation.

First, the government relied on financial intermediary institutions for supply of industrial funds rather than relying on capital markets. For this end, long-term credit banks were established along with large commercial banks in order to provide long-term loans to these key business sectors.

Second, the government introduced the fiscal investment and loan programs (FILP) in order to channel public funds to key industries through newly established public financial institutions such as the Japan Development Bank and small business loan corporations. The source of fund came from the postal savings and, at the initial stage, collateral fund established with earnings from the sales of products supplied by the US government’s commodity aid.

Third, the Bank of Japan (BOJ) supplied high powered money to private sector by providing loans to private financial institutions through “window guidance”. Commercial banks borrowed money from the BOJ and actively lent to business sectors, resulting in a low capital ratio (“over-loan”). Business sectors borrowed heavily from financial institutions, resulting in a low capital ratio (“over-borrowing”).
This type of monetary expansion usually leads to a rapid inflation. However, in Japan, overall inflationary pressure did not emerge. This was due to the fact that the long-term money provided was immediately used for real business investment, leading to an expansion of production capacity in a very short period.

“Over-loan” ought to raise the bankruptcy risk of financial institutions. However, the government policy protected banking sector from bankruptcy and from cut-throat competition. Banks that faced financial difficulty were merged with healthier banks before their collapse. This policy scheme was often labeled as “convoy system”, with the Ministry of Finance acting as a commander in chief. From the 1950s to the early 1990s, no major bankruptcies in the banking sector had happened.

Interest rates were controlled at lower levels than potential market rates (open financial markets were underdeveloped, though). An “extraordinary” interest rate control law, enacted in 1948 in order to control increases in interest rates during the post-war hyper-inflation, survived 40 years and kept deposit and loan rates at low levels. Together with this interest rate regulation, official discount rate (the rate of the BOJ loans to commercial banks) was kept lower as well.

Artificially-kept low interest rates under a shortage of savings naturally bring about excess demand for loans, and in turn calls for credit rationing. “Window guidance” was adopted to compel commercial banks to provide money to key business sectors and entities, and to restrict loan supply when monetary policy was tightened.

The only liberalized financial market was the “call loan” interbank market where financial institutions transacted short-term money with each other in order to finance temporary shortages of fund. The “call” rate was regularly higher than the official discount rate, and therefore regional banks and other small-size financial institutions had incentives to provide their surplus deposit to the call market rather than supplying loans to local and small businesses at less favorable terms.
The Japanese economy eventually entered an economic growth process with positive feedbacks: demand expansion—production expansion—increases in income—consumption expansion—further income expansion—increases in savings—investment growth and an expansion of production capacity. The rapid growth period from the late 1950s to 1960s was thus created.

This virtuous cycle particularly benefited big businesses in heavy industries such as metal, chemical, energy and machinery. Scarce funds were preferentially allocated to them with lower cost of capital. On the other hand, small businesses and consumer-goods and services sectors suffered from fund shortages and resultant insufficient business investment, although lower prices of capital goods as a result of massive investment in machinery industries partly facilitated investments by small businesses.

This policy scheme was often criticized as it was too much in favor of key industries and big businesses. However, this strategy seemed to be generally accepted by most Japanese as a kind of “trickle-down approach” to raise income and living standard in Japan. In forming a consensus, government’s medium-term economic plans, particularly the National Income Doubling Plan of 1960 contributed significantly.

Although it was generally a big success, this approach left a problem of “dual structure”, that is, a world of difference in productivity, wage and other working conditions, and competitiveness between heavy industries and big businesses on one hand and consumer-related and public-service sectors on the other. The cause of poor performance of the latter sectors was twofold, shortage of investments and a lack of market competition (to be described later). Today, this is still a major challenge to the Japanese economy that calls for a major structural reform.
Since the end of the World War II, Japanese tradable industries were highly protected from international competition. Imports, foreign exchange transactions and inward foreign direct investment were all tightly regulated. Trade barriers took the form of foreign exchange quota as well as tariff and other non-tariff barriers.

The trade structure then was to export labor-intensive manufacturing products, earning foreign currency revenues (foreign exchange), and to import capital- and technology-intensive manufacturing products and raw materials.

Until the first half of the 1960s, a major constraint to Japanese economic growth was “the ceiling on balance of payment”. An expansion of the Japanese economy triggered an import boost and thus created and widened trade deficit. The BOJ had to tighten monetary policy in order to protect the value of Japanese yen (fixed exchange rate of yen). Monetary tightening executed in the forms of a reduction in loan supply to private financial institutions and an increase in official discount rate, effectively reduced banking credits extended to business sector that highly relied upon bank loans, put a brake on fixed investment, decelerated the growth, and thus led to an improvement in external balance. Once monetary policy was loosened, Japanese economy rushed into a next expansion phase with quick recovery in credit supply and investment.
The fact that the Japanese economy was in the process of catch-up with industrialized economies, itself, was a major enabling factor in Japan’s sustained rapid growth. As the long-term goal of the economy and society was fairly clear in Japan (“to catch up with industrialized economies”), a consensus on the strategy of economic and corporate development was easy to build. Moreover, the catch-up process had the following “latecomers’ advantages”:

First of all, it facilitated the technological progress. An import of foreign technology was put high priority in the allotment of foreign currency (limited foreign reserves). Manufacturing technicians and workers had sufficient technical basis in order for them to utilize, emulate, and improve imported technologies (“improved engineering”). Manufacturing companies had ability and strong will to accept such technical progress (See, for example, Ohkawa and Rosovsky (1973, Chapter 9)).

Secondly, foreign businesses were seen as good reference for future developments in Japanese business activities and trends in consumer demand. Thus, Japanese companies effectively avoided market risks pertaining to new business operations.

Thirdly, for manufacturing companies, sales success in the markets of advanced economies was a powerful demonstration of their products’ quality and competitiveness in the domestic market. Thus, they made massive efforts to export their products, resulted in productivity enhancement, new technology development, quality control, and strengthening of non-price competitiveness that often offset increases in labor costs.
During the 1950s, as Japanese exports increased, industrialized countries gradually strengthened their request to Japanese government to open up her market. In the 1960s the Japanese government initiated the process of market opening in a scheduled and step-by-step manner.

First, trade liberalization was conducted by changing foreign currency quota for imports of respective commodities (FA, fund allocation) to an automatic approval (AA). In 1960 the government adopted a comprehensive plan to liberalize foreign trade that changed a ground rule from “restriction as a rule, openness as an exception” to the contrary. The ratio of liberalized imports rose from 34% in 1959 to 93% in 1966.

Second, with regard to foreign exchange transactions, yen regained convertibility (exchangeability) in 1960. In 1964 Japan accepted the IMF Code Article 8, which ruled out foreign exchange restrictions for the purpose of balance of payment stability.

Third, as for capital transactions, the law on foreign capital of 1950 stipulated that inward FDI was allowed only if it contributed to an improvement in balance of payment. In fact, the majority of FDI filings were not approved, as they were perceived to have risks to harm Japanese economic development. In 1967, a basic program for capital liberalization was adopted. The program was implemented until 1970, again in a step-by-step manner. By 1970, in 80% of industries, foreign investment with more than 50% ownership were allowed.

<table>
<thead>
<tr>
<th>1-5 Market Opening in the 1960s</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Foreign trade</strong></td>
</tr>
<tr>
<td>1960: Trade Liberalization Program</td>
</tr>
<tr>
<td>“Positive list” □</td>
</tr>
<tr>
<td>“Negative list” □</td>
</tr>
<tr>
<td>Foreign currency quota □</td>
</tr>
<tr>
<td>Automatic approval</td>
</tr>
<tr>
<td>Import liberalization ratio</td>
</tr>
<tr>
<td>1959  1966</td>
</tr>
<tr>
<td>34%   93%</td>
</tr>
<tr>
<td><strong>Foreign exchange</strong></td>
</tr>
<tr>
<td>1960 Restoring yen’s convertibility</td>
</tr>
<tr>
<td>1964 Accepting IMF Code article 8</td>
</tr>
<tr>
<td><strong>Inward FDI</strong></td>
</tr>
<tr>
<td>1967~1970 Basic Program for Capital Liberalization</td>
</tr>
<tr>
<td>1970 80% of industries allowed for 50% or more foreign possession</td>
</tr>
</tbody>
</table>

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As wage level went up, exports of labor-intensive manufacturing products such as textile products gradually lost their price competitiveness. On the other hand, prices of capital-intensive and technology-intensive products were basically kept flat, as wage increases in these sectors were largely offset by productivity gains. Their prices relative to those of foreign products showed a declining trend, thanks in part to fixed exchange rate of yen. Thus, the structure of comparative advantage in Japanese manufacturing sector had completely shifted. Capital- and technology-intensive products were also products that face elastic demand (high income elasticity). As a result, structure of export changed dramatically.

Japan’s industrial structure changed rapidly reflecting these shifts in comparative advantage. Some industries exited or slimmed down substantially, as seen in textile, coal mining, shipbuilding and, after the first oil crisis, aluminum. Positive adjustments had been generally successful. Chemical industry, originally concentrated on production of fertilizers, shifted its focus to basic chemicals, and then to “fine” chemicals. Cement and other related industries moved to a production of synthetic materials such as “fine” ceramics. Textile industries turned themselves into multilateral fashion industries.

Looking at the GDP components, exports or external demand had not necessarily been the major contributor to Japan’s economic growth, at least until the first half of 1960s. On macro basis, business investment had been the major engine for Japan’s growth. The contribution of export expansion-- “trade (export) as an engine of growth”-- was made rather through its microeconomic effects by stimulating innovation and productivity growth in the manufacturing sector.
The hyper-inflation after the war was partly attributable to massive budget deficit of Japanese government and its direct financing by the BOJ. In order to control inflation and to prepare for a self-reliant economic reconstruction, the 1947 Budget Law prohibited the issuance of bonds to finance current deficit, so-called “deficit financing (covering) bonds”. Initially, there were loopholes in budgeting due to existence of special accounts. Since the FY1949 budget, Japan’s national budget was balanced on a consolidated basis (that is, including special accounts). Until the first half of 1960s, the budget was kept neutral to the macroeconomy.

The recession in 1965 turned to be the first post-war economic slump against which monetary loosening was not effective. A serious question was raised whether the post-war rapid growth process driven by business investment had ended. Pessimistic views predicted persistent shortage of final demand unless it was supported by government demand. In 1965, due to shortage of tax revenue, the government was forced to issue deficit financing bonds, with an enactment of an extraordinary law to allow it. Since then, in order to fill gaps in final demand while keeping up to the Budget Law, Japanese government continued to issue bonds in the name of “construction bond”, bonds to finance development of social overhead capital. The size of bond financing (deficit financing by bonds) continued to be small until mid 1970s.
To what extent did the government’s economic plans contribute to the success in Japan’s post-war development?

The Japanese government first adopted “the Economic Self-reliance Five Year Plan” in 1955. Then economic plans of five to ten-year duration were created in sequence. Particularly, “the Doubling National Income Plan” adopted in 1960 with the target year of 1970 was often regarded as the most successful plan. The plan that aimed at doubling national income in real terms in ten years was executed successfully by building confidence among Japanese people and businesses in attainability of such a rapid economic growth.

Up to the present day, there have been 14 officially adopted economic plans. Although their plan periods were five to ten years, all of them were replaced by new plans before the end of their original plan periods. This was partly because deviations of actual economic conditions from assumed economic framework, and partly because new administrations preferred to adopt their own new plans when they took the executive office. Even before the enactment of the first official plan, there were discussions among/between government sections, businesses, consumers and academia that contributed to national consensus building on development strategies.

Economic plans in a market economy were to communicate government’s view on the future of Japanese economy to the public, and to help in forming national consensus. Japanese economic plans usually consisted of the following ingredients: i) medium-term development scenario that the government assumes, including an economic framework such as targeted rates of economic growth and inflation; ii) medium-run economic policy goals and policy priority, including allocation of social overhead capital investment in the plan period; and iii) private sector’s actions the government considered desirable. These plans were of “indicative-type” rather than “command-type” widely seen in centrally planned economies.
**Examples of economic plans**

<table>
<thead>
<tr>
<th>Name</th>
<th>Plan period</th>
<th>Major purposes</th>
<th>Growth target/actual growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Economic Self-reliance Plan</td>
<td>1956~1960</td>
<td>Economic self-reliance</td>
<td>4.9%</td>
</tr>
<tr>
<td>Doubling National Income Plan</td>
<td>1961~1970</td>
<td>Full employment</td>
<td>8.8%</td>
</tr>
<tr>
<td>Economic and Social Development Plan</td>
<td>1967~1971</td>
<td>High growth</td>
<td>7.8%</td>
</tr>
<tr>
<td>Economic and Social Basic Plan</td>
<td>1973~1977</td>
<td>Higher living standard</td>
<td>10.0%</td>
</tr>
</tbody>
</table>

During the rapid growth period, the plans generally contributed to a consensus formation. The typical case was the Doubling National Income Plan. Subsequent plans such as “the Economic and Social Development Plan” (1967—1971) and “the New Economic and Social Development Plan” (1970—1975) addressed problems that emerged as side effects of the rapid growth, such as pollution, income inequality, and rapid urbanization and concentration. These plans focused on and formed consensus around the importance of more balanced economic development.

Although the plan was very short-lived because of dramatic changes in economic environment caused by the first oil crisis, the “Economic and Social Basic Plan” (1973—1977) focused on people’s well-being and international aspects of development. With this external “shock”, a pessimism prevailed in Japan that the Japanese economy lost its growth potential. The “Economic Plan for the Second Half of 1970s” (1976—1980) advocated potential annual growth rates of 5 to 6% and emphasized structural reforms and energy-saving initiatives in order to attain the growth potential, and thus contributed to Japan’s overcoming of the oil crisis.

Compared to these plans, the subsequent plans were less likely to have contributed in a significant manner in forming consensus. During the rapid-growth period, Japan was in a catch-up process, and thus a consensus formation was much easier. In a post catch-up era, government plans should rather be limited to government’s own reform agenda such as regulatory reforms and budgetary reforms.
In the development of Japanese industries, certain institutional schemes and business practices played an undeniable role. Typical Japanese economic system and business practices include long-term employment and related labor market practices such as an in-house training, dominant role of banking sector in corporate finance, corporate governance controlled by managers supported by a main bank system and cross share holdings among companies, and a close relationship between government and business sectors with regulations and other kinds of market intervention such as “the guidance”.

These elements of Japanese economic system are believed to be either traditional factors deeply rooted in Japan’s culture, or frameworks that were designed after the WWII for a quick recovery from the destitution of the war. However, according to recent research results, many of the elements of Japanese economic system in fact originated just before the World War II as a part of national mobilization policies in preparation for the war. The system survived the war and was built-in to the Japanese economy even after the war. Although most of the practices started just before the WWII, they substantially transformed after the war and have contributed to Japanese economic development in a consistent, coordinated manner.

Whether the market economy “Japanese-style” was a rational system or not continued to be a controversial question. It was characterized by its long-term nature. That is, it included stable long-term engagement of economic agents, often implicit both in intra- and inter-company relations. Some elements of the system were exclusively Japanese, while other aspects were commonly shared with other market economies.

Although the long-term relationships embedded in the Japanese-style market system contributed positively to her economic development, it was exclusionary in its nature. New and potential entrants to markets, particularly foreign governments and businesses repeatedly requested transparency and business opportunity. (Some of the schemes have been criticized for their rigidity and difficulty in adjusting to current changing environment.)

The Japanese system apparently worked effectively during the “catch-up” period of development. However, after having “caught up,” it is now believed that new progress must come from autonomous risk-taking behavior by businesses and individuals. In this regard, the Japanese system of development based on consensus and cooperation that was once so successful had become an obstacle to such initiatives.
A separation of ownership and management of corporate entities was originally established in the United States. Japan, too, had the separation of management from ownership, but in a Japanese style. A large part of corporate equities was (and still is) held by other corporate firms including financial institutions, often known as “stable shareholders”, with a significant portion of this took the form of “cross share holding” among firms. Those shareholders were believed to be stable as they do not usually sell off the shares or try to take over the firms or intervene in their management.

Cross holdings of corporate shares originated after the WWII, partly as a substitute to pre-war Zaibatsu conglomerates that were forcefully resolved by the order of the US troops, and partly as a prevention against M&As by foreign multinationals.

Thanks to this common practice, Japanese corporates had been usually free from adversarial takeovers and intervention by shareholders. Moreover as the stable corporate shareholders did not usually request high dividends, the capital cost of equity finance had been extremely low. Corporate profits were mostly re-invested in new equipment, and this in turn raised the value of the firms and created massive capital gains for these shareholders.

This tendency of low dividends was formed during the WWII, when high dividends to capital investment were deemed inappropriate (Noguchi (1995)). In 1939, dividend regulation was introduced. After the war, corporates tried to hold shares mutually in order to avoid takeovers. When inward foreign direct investment was liberalized in the 1960s, the system was effectively utilized to protect Japanese companies from takeover bids by foreign multinationals.

Thanks to this practice of stable shareholdings, corporate managers could pursue long-term goals in their management. As they were not dominated by short-term profitability, they were able to invest in equipment, research and development, and human resource development. Downside was that corporate managers could avoid restructuring of their management costs as they were not subject to monitoring by capital markets.

<table>
<thead>
<tr>
<th>Shares issued by business companies</th>
<th>1987</th>
<th>1995</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio of shares held by stable holders</td>
<td>29.7%</td>
<td>28.7%</td>
<td>27.9%</td>
</tr>
<tr>
<td>of which held by financial institutions</td>
<td>22.0%</td>
<td>20.1%</td>
<td>12.9%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Shares issued by banks</th>
<th>1987</th>
<th>1995</th>
<th>1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio of shares held by stable holders</td>
<td>55.7%</td>
<td>53.3%</td>
<td>45.6%</td>
</tr>
<tr>
<td>of which held by business companies</td>
<td>34.4%</td>
<td>32.9%</td>
<td>28.5%</td>
</tr>
</tbody>
</table>

Source: NLI Research Institute (adjusted series for change in disclosure rules)
Corporate finance relying on banking

Functions of “the mainbank system”

– Saving of costs associated with asymmetry of information
  • Screening and monitoring
  • Signaling to other financial institutions
  • Corporate governance

– Insurance to corporate management risks

– Information exchange

Japanese corporate sector relied heavily on loans extended by financial institutions. Even today, when corporate financing through capital market (direct financing) is growing, a substantial portion of business debt stock is still in the form of bank loans (indirect finance). According to the Bank of Japan’s flow of funds account, in 1997, non-financial corporations’ aggregate outstanding loan amounted to 525 trillion yen, in which 407 trillion yen (77.5%) was private bank loans as compared to corporate shares of 291 trillion yen and other securities of 83 trillion yen.

Most corporate companies have their main banks. A main bank for a firm is defined as the bank(s) that has the largest share in total bank loans extended to the firm. Moreover, main banks often arrange bond and equity finance for the firms, and regularly monitor their corporate management and business plans/projects. From a microeconomic view point, the regular collection of borrowers’ information had been a good therapy for the problem of information asymmetry between lenders and borrowers, and saved costs of risks associated. (the “monitoring” function of main banks). In case management performance of a borrower firm temporarily worsened and the risk of bankruptcy arose, its main bank was expected to step in and rescue them with contingent loans and loan rescheduling. A main back dispatched top managers and extended advice in its rehabilitation (the “insurance” function). When a decision was made by a main bank to finance a firm’s project(s), other banks were pleased to provide additional loans as the main bank guaranteed the profitability of the project(s). In case of difficulties, the main bank was expected to take the burden of a corporate bailout (the “signaling” function). The mainbank system had played a role of corporate governance in the Japanese post-war system of development. In post-war Japan where shareholders and capital market did not assume the monitoring role due to the existence of “stable shareholders” by cross share holdings, mainbanks took that role.
As a matter of fact, before the World War II, corporate firms relied more on capital markets for their finance. Commercial banks then often lacked capacity to evaluate borrowers’ repayment capabilities and associated risks. As the war became imminent, the government tried to provide a larger portion of available funds to military-related industries by seeking a more direct control over fund flows. The authorities blamed stock markets for their speculative and disorderly nature, and encouraged markets of financial intermediation by banks, as the authorities believed that financial intermediation by banks were much more controllable. The main bank system itself was created during the WWII as a part of the systematic control of financial sector. In 1942, examination departments were introduced into commercial banks and began their regular monitoring of borrowers. This scheme was thought to be the origin of the main bank system after the war (Noguchi (1995)).

The main bank system facilitated economic growth by allocating funds to growing industries. A tight regulation of the financial sector by the Ministry of Finance, that is, so-called “convoy system” kept this sector “orderly” and less competitive by preserving a stable main bank scheme. The main bank scheme helped businesses to develop long-term plans by regularly providing loans and serving as a lender-of-last-resort in case of financial difficulties. Thus, The main bank scheme played an important role in Japan’s corporate governance as it kept corporate management prudent and long-term oriented.

Downside was that the scheme unavoidably weakened competition among financial institutions to attract corporate customers/borrowers. Main banks often influenced borrowers’ finance decisions and hindered a sound development of capital markets in Japan.
Labor market practices based on a long-term employment

- Japanese style employment practices
  - Long-term or “life-time” employment
  - Wage increase and promotion based on seniority
  - On-the-job training (OJT)
  - Intra-company labor unions

- Rationality of long-term employment
  - Accumulation of company-specific skills and technology
  - Smooth transfer of skills from one employee to another
  - Smooth introduction of new technology
  - Saving of workers’ transition costs of changing jobs
  - Saving of monitoring workers

The Japanese labor market had been characterized by its so-called “Japanese-style employment practices.” This concept usually consists of a long-term employment (“lifetime” employment), a seniority-based wage system, promotions in internal labor markets; intra-firm labor unions; and a long-run on-the-job training (OJT). Intra-firm labor markets were formed with equal opportunity given to all newly-recruited workers, with a slow promotion process (in selecting winners), and with active “visible” competition among the participants.

Reflecting these employment practices, labor adjustments were performed mainly through lengthening/shortening working hours, wage adjustments, and intra-firm job transfer, rather than through layoffs. This prevented the rate of unemployment from rising even during recessions. Labor unions were organized intra-firm. The membership usually extended to both white- and blue-collar workers.

Before the WWII, Japan’s labor market was more like that of an economics textbook type. Although some big businesses had introduced long-term employment practices for their core white-collar workforce, manual workers (blue-collars) were most likely hired in spot markets. In 1937, in order to secure labor-employer cooperation in serving the nation, intra-firm unions encompassing both white-collar and manual workers were organized. These practices survived throughout the post-war development period as they had systemic advantages, such as a high level of workers’ morale, cooperative behaviors among workers, firms’ positive attitude toward long-term human resource investment and OJT, and employees’ positive attitudes toward technological innovation.

From microeconomic viewpoints, these practices were effective means to overcome difficulties associated with asymmetry of information on employees’ ability and work ethics, to promote workers’ faith toward their companies through “reputation” and “hostage” mechanisms, and to settle conflicts of interest in intra-firm, intra-workers transfer of skills.
During the period of catch-up, businesses, employees, financial institutions and the government basically shared common goals and common strategies with stable trade relationships. Stable, long-run trade relations played the role of fulfilling information gap with regard to participating economic agents’ will and ability.

Japan’s tradable sector built strong comparative advantage in manufacturing, taking advantage of Japan-specific employment practices, joint development of parts/components through a supplier network called “keiretsu,” long-term management strategy supported by the mainbank corporate governance structure, and effective protection from foreign capital through cross share holdings.

On the other hand, this successful system unavoidably restricted market competition as it was shown earlier by effectively preventing entries and even exits. In the tradable sector, however, tough international competition effectively offset the disadvantage of weaker domestic competition. The Japanese system of development and business practices adjusted themselves in accordance with the changes in the external environment. As tariff barriers and quantitative restrictions effectively protected the domestic market until the late 1950s, actual or potential pressures of international competition mainly came from export markets. Even in the domestic economy, the markets of the tradable sectors were very competitive during the industrialization period (Aoki and Okuno (1996, p.13)). Although the competition was not provided through a typical neoclassical-type market mechanism consisting of many, mutually unidentified participants, it was at least “visible” among participants whose names and faces are known to each other. The “visible” competition was often tougher than that of many “invisible” participants.

In contrast to the success in the tradable sector, non-manufacturing sectors of Japanese economy lagged behind being effectively isolated from global competition. Moreover, the government’s market intervention, excessive regulations, fiscal and financial subsidies, and protection of domestic markets from imported services and foreign direct investments, hindered sound competition in these sectors, either domestic or international. Thus, productivity growth was slow or virtually non-existent in non-tradable non-manufacturing sectors. In non-tradable sectors, technical progress and emergence of new businesses almost always lagged behind those in other industrial (or industrializing) countries.
Certain non-tradable sectors grew, nonetheless, as demand structure sophisticated and diversified. Relatively vibrant non-tradable sectors were distributions, leisure services, business services, and housing and urban development.

Productivity growth in non-tradable sectors were generally slow, particularly relative to that in tradable sector. As a result, mild inflation in consumer prices emerged. As labor union movements became coordinated across sectors, wages in less productive non-tradable sectors tended to increase with increases in manufacturing wages. It imposed a higher unit labor cost in non-tradable sectors and these increased costs were passed to their product prices as those markets were heavily protected. Thus, while manufacturing producers’ prices did not show any rising trend in spite of cyclical fluctuations, consumer prices constantly rose at a rate about five percent per year.

The BOJ provided ample money in order to support a rapid growth of the Japanese economy since the 1950s. Since 1965, the government began to issue bonds every year, sold to the syndicate of private financial institutions. Under a tight financial market regulation, the bond interest rates were set substantially lower than long-term market rates. Therefore bonds were not attractive instruments for the financial sector. The BOJ ended up purchasing them from the financial sector within one year of issuance. Thus a very accommodative monetary policy.

This accommodative monetary policy and resultant mild inflation assured profits for manufacturing companies and thus attracted new investment while enabling job creation in non-manufacturing sectors that support the expansion in manufacturing sectors. Thus, a strong macroeconomic growth.
### Annual growth of total factor productivity

<table>
<thead>
<tr>
<th>Sector / Activity</th>
<th>1955-70</th>
<th>1970-80</th>
<th>1980-95</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturing</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light manufacturing</td>
<td>2.7</td>
<td>1.7</td>
<td>0.2</td>
</tr>
<tr>
<td>Materials</td>
<td>9.2</td>
<td>-1.9</td>
<td>0.6</td>
</tr>
<tr>
<td>Machinery</td>
<td>11.9</td>
<td>7.6</td>
<td>5.5</td>
</tr>
<tr>
<td><strong>Non-manufacturing</strong></td>
<td>4.2</td>
<td>0.3</td>
<td>0.3</td>
</tr>
<tr>
<td>Construction</td>
<td>2.7</td>
<td>-2.9</td>
<td>0.3</td>
</tr>
<tr>
<td>Finance/utility/T&amp;T</td>
<td>6.4</td>
<td>1.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Distribution &amp; service</td>
<td>3.3</td>
<td>-0.1</td>
<td>0.2</td>
</tr>
</tbody>
</table>

**Notes:**
- Production growth
- TFP growth
- Contribution of capital
- Contribution of labor
- Annual growth of total factor productivity (%)

**Detailed Growth Rates:**
- **Manufacturing**
  - **Light manufacturing**
    - Production growth: 2.7% 1.7% 0.2%
    - TFP growth: 2.7% 1.7% 0.2%
    - Contribution of capital: 4.6% 2.8% 1.2%
    - Contribution of labor: -0.8% -0.9%
  - **Materials**
    - Production growth: 19.6% 2.8% 2.7%
    - TFP growth: 9.2% -1.9% 0.6%
    - Contribution of capital: 7.2% 4.7% 1.8%
    - Contribution of labor: 3.2% -0.1% 0.4%
  - **Machinery**
    - Production growth: 21.7% 9.6% 6.6%
    - TFP growth: 11.9% 7.6% 5.5%
    - Contribution of capital: 6.2% 2.6% 1.9%
    - Contribution of labor: 3.6% -0.7% -0.8%
  - **Construction**
    - Production growth: 11.7% 2.9% 2.5%
    - TFP growth: 2.7% -2.9% 0.3%
    - Contribution of capital: 5.9% 4.3% 2.1%
    - Contribution of labor: 3.2% 1.4% 0.1%
  - **Finance/Utility/Telecom**
    - Production growth: 12.4% 4.9% 3.9%
    - TFP growth: 6.4% 1.8% 0.7%
    - Contribution of capital: 3.3% 2.2% 2.3%
    - Contribution of labor: 2.7% 0.9% 0.9%
  - **Distribution/Service**
    - Production growth: 9.9% 6.1% 3.8%
    - TFP growth: 3.3% -0.1% 0.2%
    - Contribution of capital: 5.0% 5.2% 2.8%
    - Contribution of labor: 1.6% 0.9% 0.8%

**General Observations:**
- The annual growth of total factor productivity in manufacturing showed a steady increase over the periods 1955-70, 1970-80, and 1980-95.
- Light manufacturing and materials had the highest growth rates in 1955-70, with 9.2% and 11.9%, respectively.
- Machinery had the highest growth rate in 1970-80, with 11.9%.
- Construction and Finance/Utility/Telecom showed a decrease in TFP growth during 1980-95.

**Conclusion:**
- Japan's post-war development was characterized by significant growth in manufacturing sectors, particularly machinery and materials, which contributed to overall productivity gains.
Until around 1960 since the end of the World War II, Japan had been a “developing country,” judging from the level of per capita income, external debt, and from a labor market with sufficient supply of unskilled labor (Obama and Watanabe (1996)). The catch-up process seemed to have ended in the latter half of the 1960s, as indicated by the level of per capita GDP adjusted for purchasing power parity. However, the economic system that brought about the success in “catching-up” did not evolve by itself to adjust to needs in the post catch-up era. The traditional process of consensus formation played a significant role again at the time when Japan faced the first oil crisis of 1973-74. In order to cope with quadrupled oil price, economic agents implicitly agreed, led by the government, to accept tough industrial and employment adjustments and not to rely on accommodative macroeconomic policies for recovery. Eventually, the Japanese economy overcame high energy prices by energy-efficient manufacturing products, and thus strengthened its international competitiveness. The Japanese economy overcame the second oil crisis of 1979, again without significant inflation or commodity shortage. In longer perspective, however, this resulted in the survival of the sense of consensus formation for collective action and government leadership that are not suitable for post catch-up era. Causing various problems in the Japanese economy, this eventually led to an economy-wide speculative bubble in the second half of the 1980s followed by a persistent stagnation during the entire decade of 1990s after the bubble collapse.

After the catch-up process was over, exogenously given goals for business and technology development no longer existed. Companies had to create their own goals and management strategies suited for their new targets. The Japanese-style schemes and business practices characterized by a long-term stable trade relationship enabled goal-oriented and consistent behavior by all participating agents of the economy when the nation shared common goals, even if the goals and business targets were not explicitly given by top management. Aoki and Okuno (P.10) pointed out that actual human activity is not a textbook type with fully rational behavior. The human behavior is only “boundedly” rational. Human beings can only imperfectly grasp the environment and conditions and thus can make only partially optimal choices. Sharing common goals and strategies facilitates economic/social activities with partially rational behavior. An effectively consensus-oriented economic system should guarantee that other participants share the same set of information, the same goals, and the same strategy. The Japanese-style economic system thus mitigated the downside risks associated with partial rationality in human behavior. With long-run relations and information sharing, the potential problems that can occur from the “asymmetric information” could be avoided.

However, once the common goals disappeared, the problems associated with the partially rational behavior (within an institution) emerged. Thus, an indication of explicit goals and strategies by top management had become indispensable. The economic system Japanese-style thus lost its advantage.
The manufacturing sector, under tough global competition and particularly under pressure of persistent yen rate appreciation and industrialization of other Asian countries since the 1970s, sought to maximize the rate productivity increase. This sector thus chose some effective parts of the existing system and rejected others, and transformed some of the schemes and practices in adjustment to changing environment.

The long-term employment system survived because it was still an efficient one for intra-company job training. The manufacturing sector tended to rely heavily on company-specific technology, so long-run on-the-job training was effective.

The parts supplier “keiretsu” network system substantially changed due largely to strengthened ability of parts suppliers in developing new products. With advantageous information sharing, the “keiretsu” scheme survived, but the nature of subcontractors’ dependency on their “parent” companies virtually disappeared. In many industries, final-assembly producers were no longer capable of designing new products without cooperation of parts suppliers. Backed by technological advantages, many suppliers could abandon their former customers if terms of transaction seemed disadvantageous to them and if they can find other partners. Parts suppliers’ competitiveness was fostered by tough competition with other suppliers in the same keiretsu network and by potential competitive pressure exerted by suppliers outside the keiretsu. This has been a typical “visible” competition in the market system Japanese style. Visible face-to-face competition was often tougher than textbook-type competition among anonymous players, induced massive efforts to raise productivity, and to shorten delivery periods.

The main bank system also evolved. By the 1970s, major manufacturing companies had become no longer dependent on specific financial institutions for their investment funds as their financial bases had been strengthened and they had financing options other than bank loans. Financial institutions often lost their best customers and frantically sought new borrowers. They found new customers typically among construction, real estate and non-bank financial sectors. As business activities of these new customers involved substantial risks, and banks tended to lack information to evaluate them properly. As a result, those new loans were guaranteed by real estate collaterals whose market values were based on a very optimistic future assessment.
In the non-manufacturing sector, in addition to the lack of global competition, slower rate of growth after the end of the catch-up process narrowed the room for market competition. Traditional Japanese market system and public regulations restricted competition and protected matured or declining sectors.

The lack of competition led to lower productivity and higher prices as compared to those in international markets in the non-manufacturing sector, and imposed a high cost structure on consumers and on other industries, particularly on growing manufacturing industries. Even within the tradable sector, industries with relatively low productivity were slow to adjust themselves in light of their weakening competitiveness.

Owing to globalization of the economic activities and rapid development of information technology, the Japanese economy has got into “an era of diversity and knowledge value.” Here, even the competitiveness of the nontradable sector is determined by creative ideas and risk-taking. The functions of the traditional market system based on long-run fixed trade relations must yield to competitive pressures both in the internal and external markets.
Inadequate corporate governance
-- Promoted managers interested in expansion of organization and favorable relations with stakeholders
-- Banks seeking customers
-- Capital market lacking ability to evaluate corporate companies, just providing opportunity for equity finance

Bubble economy

Economic policies failed to deal with the macroeconomic growth slowdown and global changes in markets and technology. The government budget tended to expand with increased public works and reduced taxes for special purposes, often just to maintain businesses and jobs in stagnant industries. As a result, structural budget deficit expanded.

In the latter half of the 1980s, inappropriate corporate governance and banking sector’s loan provision jointly caused a speculative bubble. Corporate managers tended to seek expansion of their businesses without fully taking account of profitability and business risks. Many of the managers were those who promoted intra-company from employees and tended to consider first their own interests such as expansion of their organizations and maintenance of stable relations between various stakeholders, rather than to maximize shareholders’ profit—a typical case of principal-agency problems. Even major shareholders were corporate companies and financial institutions holding shares each other, also controlled by such a kind of managers.

Financial institutions, which lost former excellent customers as the main bank system weakened, tried hard to offer massive amount of loans to potentially risky borrowers, to overcome mutual competition to expand their banking business. Capital markets also lacked the ability and will of monitoring corporate management and just provided an opportunity for equity finance through massive issuance of new shares, convertible bonds, and warrant bonds. All overlooked future risks and were optimistic of the future economic growth and asset price inflation.
Fiscal and monetary policies were conducted in an expansionary manner to prevent further yen rate appreciation. To cope with the rapid appreciation of yen and the resultant “endaka fukyo” or yen appreciation recession since the Plaza Accord of G7 finance ministers and central bankers in September 1985, the government conducted a policy package of four trillion yen in the middle of 1987. This was apparently too late and too large. The official discount rate was kept at 2.5% level. Even after the Japanese economy clearly entered the expansion phase, the easy monetary stance continued, mainly in order to stabilize yen rate and to avoid resurgence of worldwide stock price decline that occurred on the Black Monday of October 1987. The 2.5% interest rate was maintained until 1989, the midst of the bubble, and fueled it. This policy stance had the effect of protecting relatively less competitive tradable industries through higher/stronger yen. Finally the BOJ had to reverse the monetary policy stance. As the timing of a shift in monetary policy stance was much delayed, the tightening that followed had to be a strict one. To calm real estate inflation, direct control of banking loan supply outstanding was also introduced. These tightening measures put a hard brake on the stock market and then real estate market, and finally the macroeconomy.

Due to the collapse of the bubble, the Japanese economy faced double challenges of short-run adjustment of “excessive” production capacity, employment and debt, formed during the bubble period, and long-run adjustments of reforming the market system Japanese style. However, the macroeconomic policies centering on public work expenditures geared to support short-term demand delayed downward adjustments of investment, bank lending, and employment, and thus brought even bigger shock wave in the latter half of the 1990s.
4. Conclusion

Structural reform
-- Taking advantage of information sharing
-- Reliance on market mechanism

Key words
-- Marketization
-- Competition
-- Choice
-- Diversity

Since the post-war economic reconstruction till the end of the catch-up process, there was a general consensus among economic agents on the goal and strategies of Japan’s economic development—to catch up with the industrialized countries. In order to attain development objectives most effectively, a utilization of institution-based long-term stable trade relationship was often more efficient than the textbook-type market mechanism. Many elements of the market system Japanese style seen in employment, business-to-business relations, banking system, and business-to-government relations, originated just before the World War II, contributed to post-war industrial development. Although this system has the risk of restricting competition, a coexistence of competition and stable relationship was available in the tradable sector thanks to international competitive pressure and entrepreneurship. The system proved particularly effective in manufacturing. On the other hand, the nontradable sector was effectively protected from the international competition partly due to an internal investment control. Productivity growth was relatively slow.

After the end of the catch-up process, common goals and strategies disappeared. Companies and households must seek new business and other opportunities with their own ideas and risk-taking. In particular, in the era of information technology, creative ideas and ability of individuals rather than institutional arrangements are important. In that condition, the market system Japanese style loses advantage and has to transform itself to a more market-oriented system.

In the manufacturing sector, being exposed to domestic and global competition, systemic reforms proceeded, and while utilizing the merits of “information sharing,” the traditional system has evolved into the one with more reliance on market mechanism. On the other hand, non-manufacturing sector suffered from defects of the Japanese system. A weak competition and strong regulations led to a delay of productivity growth and new business development in this sector. This, in turn, hurt the tradable sector by imposing a high cost structure and causing a “bubble”. The structural reform of the Japanese economy, therefore, intends to build an economic system relying more on market mechanism while utilizing the advantage of the Japanese traditional system. Key words are “marketization”, “choice”, “competition” and “diversity”.


The necessity for structural reform, or marketization, extends to wide range of the Japanese economy. Three sectors of the economy have their own reform agenda: i) business and financial sectors must reform themselves to enhance business and investment opportunity; ii) individuals or household sector must accept self-reliance discipline; and iii) the government sector must transform itself into a compact and efficient government respecting/utilizing market forces. Changes in business and the government sectors must be compatible with (and accompanied by) those in household sector. Self-reliance of individuals involves shifts in lifestyle, from the traditional reliance on business community to self-decision-making and risk-taking in choosing jobs and careers that require investments in himself/herself. Self-responsibility should be nurtured in the business sector, not relying on protection through regulations and “convoy” type financial protection system.

Generally speaking, in the business sector, various reforms have already started in order to get out of the long stagnation of the 1990s. As for government sector, some reform initiatives have started in the areas overlapping with those in business sector such as regulatory reforms and partial tax reforms. However, for public-sector-specific reform areas such as administrative reform and decentralization of government, the process has been much delayed. Budgetary reform has just begun under Koizumi administration. As for household sector, it would take a long time for the majority of people to change their lifestyles and/or ways of thinking.
Revolutions and the Evolution of Economic Systems
(based on Yukio Noguchi, “IT makes small-scale-organization economy advantageous” Nikkei, April 5, 2002)

Private ownership of the means of production

Capitalism

Imperialism

Monopoly Capitalism

Socialist Revolution

Larger-scale-organization oriented

Japan under the 1940-system

Smaller-scale-organization oriented

Industrialized China

Socialism

State ownership of the means of production

Primitive Market Economy

Industrial Revolution

IT-driven Market Economy

IT Revolution

The US economy after the IT revolution

Utopian Socialism

Linux

China under Mao Zedong (Maoist China)
... Japan’s Development Experience

The End