# INSTITUTIONAL RESTRUCTURING IN THE JAPANESE ECONOMY 1985-1996

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## Abstract

The question we seek to address is: what effect has economic turbulence since 1985 had on three of the institutional foundations of post-war Japanese industrial success? First, we examine the Japanese 'main bank' system whereby a 'main' bank is involved in a special type of long-term relationship with the non-financial firms that it lends to. Second, we look at the close inter-corporate relationships between main manufacturing firms and their suppliers. And third, we consider the nature of Japanese industrial policy and the interventionist role of the Ministry of International Trade and Industry (MITI) and the relatively weak role of Japanese competition policy under the authority of the Japan Fair Trade Commission (JFTC). In each case we present evidence which suggests that these institutional foundations of the post-war Japanese economy have been fundamentally weakened over the period we look at.

*Key words:* main bank system, buyer-supplier relationships, industrial policy, competition policy, Japanese economy.

*JEL Classification:* E65, G21, L22, L40, P17.

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## 1. Introduction

The Japanese economy has experienced an unprecedented period of macroeconomic turbulence over recent years (see Tables 1)[1]. Even before the 1997 Asian crisis this had led to a sharp rise in the number of financial institutions experiencing bankruptcy including a number of large regional banks and an international stockbroking firm.

The question we seek to address is what effect has this economic turbulence since 1985 had on three of the institutional foundations of post-war Japanese industrial success?[2] First, we examine the Japanese 'main bank' system whereby a 'main' bank is involved in a special type of long-term relationship with the non-financial firms that it lends to (see Corbett, 1987). Second, we look at the inter-corporate relationships between main firms and their suppliers (see Aoki, 1988). And third, we consider the nature of Japanese industrial policy and the interventionist role of the Ministry of International Trade and Industry (MITI) and the relatively weak role of Japanese competition policy under the authority of the Japan Fair Trade Commission (JFTC) (see Boltho, 1985). In each case we present evidence which suggests that these institutional foundations of the Japanese 'economic success story' have been fundamentally weakened over the period we look at. The rest of this introduction sketches the background to the period that we examine.

The beginning of this recent period of macroeconomic instability can be dated from the September 1985 Plaza Accord when the US and Japan reached an agreement aimed at reducing the value of the dollar-yen exchange rate. The Plaza Accord began a period of rapid yen appreciation (40% increase in real value in two years). This appreciation was accompanied by only a small reduction in the volume of Japanese

exports and was not offset by increasing volumes of imports. The result was a substantial increase in the dollar value of the current account surplus. Following the 1987 stock market crash looser monetary policy worldwide saw the Japanese discount rate fall to a period low of 2.5% in June 1989. Low interest rates prompted a stock and land market boom as lending to financial and property companies rose rapidly in the so-called 'bubble economy'[3]. Rising interest rates from June 1989 led to sharp falls in asset prices in 1990 and put pressure on the financial system as the value of assets used as collateral for bank lending declined leaving a large number of large financial institutions technically bankrupt. Declining financial wealth contributed to falls in consumption and a recession from 1991 to 1993. From November 1993 to 1997 there was a modest economic recovery.

In tandem with the financial instability initiated by the Plaza Accord there developed growing political pressure on Japan from the United States at the industry level. The appreciation of the dollar in the early 1980s had sharply worsened the US trade deficit with Japan. Not only did the US seek and get agreement on macroeconomic policy to reduce the value of the dollar and improve the competitiveness of US exports but it also fought for industry level agreements aimed at restricting Japanese exports to the US and at increasing the sales of US components to Japanese firms. These policies contributed to a significant internationalization of the Japanese economy as import volumes rose and Japanese manufacturing firms shifted lower technology production off-shore and improved the productivity of high technology production[4].

## 2. Long-Term Bank-Firm Relationships in Japan

### 2.1. The Japanese main bank system

The main bank of a particular industrial company is defined as the bank which has the largest share of bank loans to the company, holds the

settlement account of the industrial firm and has a role in dispatching managers from the bank to the firm. Main banks usually have significant share holdings in the industrial company as well (see Table 2).

Economists have understood main banks to be organizations which solve the problems associated with asymmetric information between lenders and borrowers. Takeda and Schoenholtz (1985) summarized the characteristics of the Japanese main bank as being: a high share of the total bank lending to client firms; a high ratio of total stock owned by banks; a personal relationship through bank's dispatching managers to corporate firms; the existence of general transaction relationship between main banks and customer firms; a long-term transaction relationship; and the existence of an objective to gain through a general relationship which caused the banks to be willing to shoulder a degree of insolvency risk. Takeda and Schoenholtz, in observing these key features of the main bank system, paid attention to the main bank monitoring of its client firms and stress the bank's characteristic as a producer of information relevant to a profitable bank-firm relationship. If we see the Japanese main bank in this way it appears that the main bank has two roles: the provision of corporate finance and the provision of corporate governance.

## 2.2. The development of the Japanese main bank system in the high growth rate period

The high growth rate period is taken to be the period from the beginning of 1950s to the beginning of 1970s. The average growth rate of GNP during this period is 10%, and the growth rate of private investment between 1951 and 1973 is 22% p.a.[5] The GNP of Japan in US dollar terms exceeded that of the UK in 1967 and that of West Germany in 1969[6].

Two events mark the turning points in the formation of long-term bank-firm relationships in Japan (see Teranishi, 1993, 1994). First, loan syndication[7] among banks started in 1930 and became prevalent after 1939. Second, the Designated Financial Institution System for Munition Company Financing was introduced to allocate financial resources to the military sector. In the post-war reconstruction period, larger banks formed loan syndicates to cope with vigorous loan demand from basic industries such as chemicals, steel, coal and fertilizers. The distribution of sources of corporate finance was skewed towards indirect finance (bank borrowing) because a capital market was slow to develop in the initial post-war period. Under such circumstances, the main bank system which had its origins in the pre-war period matured rapidly and made rapid progress in the high growth rate period.

Financing in the high growth period was characterized by bank finance which had a central place in the Japanese economy because of the traditional shortage of stock market funds and public sector finance. A flow of funds from deposits at financial institutions to firms played a central role in financial transactions. One of the reasons for this was that the share of bank deposits as a percentage of total financial wealth was relatively high, not only in the household sector but also in the corporate sector in comparison to other countries.[8]

Table 3 shows a comparison of the sources of corporate finance in Japan, USA, UK and Germany. It can be seen that the share of internal funds in total corporate finance is lower in Japan than in the other countries and that the ratio of borrowing to total external funds is significantly higher in Japan than in the other countries.

Under the financial circumstances outlined above bank lending grew rapidly in the 1960s and early 1970s. The annual rate of growth of lending by all the banks between 1960 and 1975 varied between 11% to 27% p.a[9]. During this time bank-firm relationships were relatively stable.

According to a survey that studies changes in major main-bank relationships (in terms of lending), the share of firms which switched main bank was only 17% (84 among 479) from 1962-67 and 15% (74 among 479) from 1967-72, with 15% (98 among 653) from 1978-83 (Horiuchi and Fukuda, 1987). The stabilized supply of funds to firms based on long-term bank-firm relationships was a principal feature of the main bank system in the post-war period.

The main bank can directly collect information about borrowers by monitoring financial transactions through the settlement accounts[10] which borrowers have at banks. Records gained from settlement accounts are acknowledged to be very important sources of information about business performance (Aoki and Patrick, 1994, p.14).

Besides bank lending, banks strengthen their ties with firms through holding stocks and by dispatching managers to firms. Table 4 shows that the share of stocks owned by financial institutions increased rapidly during the high growth period. The information gained by banks about client firms through loans, stock-holding and the dispatching of managers, is the strength of the main bank system.

In a capital market centered on a stock market large stock owners should play a key role in pressurizing business managers to realize efficiency gains. However, in the case of Japan, cross-share holding makes stock-owners' monitoring role rather vague because it is difficult to understand who is responsible for governing firms and hostile takeovers are extremely rare (see OECD, 1996). Thus, the main bank replaces large stock owners as the principal monitor of firms.

The main bank's monitoring function has three elements. First, main banks lower agency costs which arise from the asymmetry of information between owners of capital and managers. It is hypothesized that such a reduction of the agency cost makes it possible to finance

equipment investment from bank borrowing on easier terms. Several empirical studies have tried to prove the existence of a relationship between the strength of main bank relationships and the rate of equipment investment[11].

The second function of main banks is to organize loan syndicates among financial institutions. Usually, when firms raise funds by borrowing, they borrow funds not only from the main bank but also from some other financial institutions. The share of borrowing from the main bank to all the bank borrowing in the case of 6 Keiretsu groups in the 1960s to the 1980s varies between 8% and 23% (Horiuchi and Zui, 1992, p.15)[12].

Third, Corbett (1987), Aoki (1988) and Sheard (1994) point to the importance of the ex-post monitoring role of the main bank, in addition to its ex-ante monitoring. The main bank plays an important role as a coordinator during periods when the firm is going through structural adjustment, rebuilding, or merger etc. due to financial difficulties. By doing this, banks can save client firms from bankruptcy resulting from temporary financial difficulty, thus leading to a reduction of bankruptcy and associated social costs. The banks' willingness to bear the risks associated with client firms' insolvency has been explained by the 'implicit contract' hypothesis. The main bank is willing to be a sponsoring bank when client firms issue bonds, and buy bonds almost without exception when the client firms face financial difficulty and their bonds fall into default. As Sheard points out, main banks have frequently been involved with client firms' bankruptcies and rescued firm management in the 1960s and 1970s[13]. This behavior seems to support the 'implicit contract' hypothesis. However, the reality of the hypothesis has been questioned by Horiuchi and Fukuda (1987) because of the difficulty of identifying a significant empirical relationship.

To summarize the traditional role of the Japanese banking system: the main bank has supplied stable funds to corporate firms and has made it

possible for firm managers to take a long-term strategy independent from stock owners' short term interests.

### 2.3. The changing environment surrounding the main bank

Since the early 1980s there have been a number of changes in the circumstances surrounding the main bank system. The changes include the sources of finance available to the firm; the growing internationalization of the Japanese economy; and the effects of the asset bubble of the late 1980s. We examine each in turn.

From the point of view of the firm, self-finance has significantly improved because firms have had abundant internal funds and have had easy access to the capital market following the era of cheap money beginning in 1987. Table 5 shows the breakdown of sources of corporate finance in the corporate sector since 1960s. It indicates that the share of internal funds in total financing requirements and net worth has increased remarkably in the 1980s. In the case of manufacturing, the share of bank borrowing is much lower in the mid 1980s than in the 1960s and 1970s. Moreover, repayment exceeds borrowing 1985-89. On the demand side, manufacturing firms were involved in speculation which involved them raising funds to invest in financial assets. Non-manufacturing firms tended to be dependent on borrowing as a source of finance in the 1980s, but have started to repay debts in the 1990s. As a result, the share of self-financing and internal funds increased in the 1990s to twice the rate seen in the late-1980s. Table 6 suggests that larger firms have drifted away from banks as sources of finance and bank lending has increasingly been refocused from large to small firms.

The deregulation and liberalization of international and domestic financial transactions has significantly increased since foreign exchange law was reformed in 1980[14]. This movement undermined the financial, regulatory and administrative framework of the main bank system. For

example, the regulatory framework involves control of market-entry and choice of business field, the restriction of competition in such things as smaller deposit interest rates and the regulation of various fees. These regulations increased bank profits and decreased the risk of bank bankruptcies. They did this by guaranteeing a certain market share and by helping banks to maintain interest margins and fee incomes (Ikeo, 1991). However, the decrease in interest rates due to the financial liberalization reduced the rent of the banks[15]. Financial liberalization and internationalization increased the number of options for sources of finance for firms and larger firms have had easy access to overseas financial markets. Therefore corporate firms have gradually gained increased bargaining power in their negotiations with the banks.

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The number of firm bankruptcies has dramatically increased since the collapse of the bubble economy and the resultant large accumulation of bad debts by financial institutions has become a serious issue. The annual rate of change in the number of insolvencies was 10% to 20% in the late 1980s but rose to 65.8% in 1991, followed by 32.1% in 1992 (Bank of Japan, 1995a, p.138). Officially announced bad debts, that is debts of insolvent firms and overdue debts of city banks, long-term credit banks and trust banks were about 14 trillion yen in 1995. Adding this figure to an estimate of the value of both overdue debts of local banks and debts of interest reduction or exemption incurred by non-banks, all the bad debts were about 38 trillion yen.[16] Under such a circumstances the banks tend to be careful in their selection of client firms, for fear of a credit crunch.

## 2.4. A change in long-term bank-firm relationships?

The question raised by the proceeding discussion is: how have changing circumstances changed the traditional roles of the main bank with respect to corporate finance and corporate governance?

Bank lending increased sharply in the bubble of the late-1980s and decreased rapidly in its aftermath. The average annual rate of change of bank lending (real loans outstanding) is 1.8% between 1981 and 1985, 13.6% between 1986 and 1990 and 1.8% between 1991 and 1995 (Bank of Japan, 1995b, p.65). Table 5 shows the declining reliance of large firms on banks as a source of finance.

The rate of change of bank lending by size of firm in Table 6 shows differences between firms according to size. Larger firms have not relied on bank borrowing because self-finance has improved so much (however, the ratio of loans between Keiretsu groups tends to rise slightly[17]). However, smaller firms continue to be dependent on bank borrowing since they have difficulties in self-financing in part due to their difficulty in accessing the capital market.

For smaller firms the share of borrowing in both manufacturing and non-manufacturing finance has increased during the 1980s and the 1990s. Comparing 1980 to 1994, the share of bank borrowing in total financing in manufacturing increases from 30.3% to 41.1% (within this figure the share of long-term borrowing increases from 16.5% to 25.7%), and the share in non-manufacturing increases from 32.4% to 43% (within this figure the share of long-term borrowing increases from 15.2% to 24.9%) (Bank of Japan, 1996a, pp.74-75).

The features of the bank lending since the late-1980s were as follows: the share of non-manufacturing loans to all loans increased and loans to real estate, construction and non-bank financial institutions increased sharply in the late-1980s (Bank of Japan, 1996b). The bank loans to these sectors responded to money demand mainly for land and stock speculation which were not related to real economic growth. In fact, banks provided client firms with a large sums for speculative funds by way of financial subsidiaries (of the banks). This behavior led to a

deterioration of bank control in the face of mounting bad debts in the wake of the bubble collapse.

How did main banks adjust their relations with firms following the collapse of the bubble economy? Tables 7, 8 and 9 look at three aspects of their relationship. Table 7 shows the change in the ratio of stocks owned by financial institutions. In the table, stockholders included represent only the largest 20 holdings in the company. The share of city banks decreased very slightly during the 1980s and the 1990s, but that of trust banks increased sharply.

Table 8 shows that the breakdown of the change of firm numbers associated with main banks in terms of owned stock. It can be seen that the numbers of both main corporate firms and sub-main firms associated with main banks (a and b) increased sharply in the late 1980s. Roughly speaking, the numbers of main corporate firms and sub-corporate firms associated with trust banks decreases after the bubble collapse, but the numbers associated with long-term credit (LTC) banks and city banks continue to increase slightly. This evidence indicates that LTC and city bank-firm relationships in terms of stockholding qualitatively and quantitatively expanded sharply in the bubble economy and went on expanding after the collapse of the bubble.

The main bank is active in corporate governance. Frequently, the main bank dispatches executives into senior managerial positions in the firm, often into important decision making posts such as president, vice-president, or senior executive director in charge of finance or corporate planning (Sheard, 1994, p.197). Table 9 shows the number of mangers which 14 city banks dispatched to client firms and the number of firms to which banks dispatch managers. It can be seen that these numbers increase sharply in the late 1980s as banks tried to rebuild financially distressed firms by dispatching managers.

We summarize the changing nature of bank-firm relationships since the mid-1980s. On the one hand larger firms have become less dependent on bank borrowing as a source of finance, reducing the banks role in corporate finance. This should reduce quality and quantity of the information which banks obtain from their clients. However, on the other hand banks have strengthened ties with firms through increased stock-holding and dispatching of managers to firms which should improve the effectiveness of their corporate governance role. However these measures probably reflect an attempt to reverse a decline in the effectiveness of corporate governance due to other factors.

## 2.5. Evaluation of the changing role of the Japanese main bank

Judging from the actual state of the financial economy in the bubble and its aftermath, the effectiveness of the main bank's function has deteriorated significantly[18]. As was discussed above, bank lending to larger firms decreased substantially after the 1980s, but bank lending was increasingly demanded by small and medium size firms which were relatively inferior to larger firms in terms of management ability. Banks responded to increasing competition among financial institutions with offers of easy monitoring that relied on the collateral value of its assets (i.e. its stock market valuation) rather than the prospects of the firm. This effectively reduces the control exerted by the main bank and exposes the bank to greater risk.

Sheard (1994) argues that it is an important characteristic of the Japanese main bank system that when client firms fall into default, main banks undertake more burden than their original loan share. Table 10 shows that firms which sharply increased bank borrowing in the bubble were largely dependent on other banks and not on the main bank for the additional borrowing. This suggests that banks enlarged their lending to companies without sufficient risk management. Assuming that the main bank has a role as a centre of corporate governance, the main bank

played a very limited role in monitoring new (unsyndicated) loans because the main bank was not responsible for new borrowing from other banks[19].

Have main banks rescued client firms when they experienced financial distress following the collapse of the bubble? Table 11 shows the main bank lending to a sub-sample of corporate firms whose profits deteriorated in comparison with a full sample of firms. First, comparing the full sample to firms which record deficit settlement accounts more than twice between 1990 and 1995, there is no difference in the frequency of switching of main banks between full sample and the deficit firms. However, in the case of deficit firms there are fewer cases where the share of borrowing from the main bank increases, and more cases where the share of borrowing from the main bank decreases. Second, in case of firms that record an interest coverage ratio (business profit / interest payment and discount fees) of less than 1, only 20% of firms switch main bank while 60% of firms reduce the share of borrowing from their main bank. This evidence implies that the main bank took a passive stance to financially distressed firms by reducing its share of loan to firms rather than being involved in a positive rescue loan.

Thus, in conclusion there seems to have been a change in the nature of the main banks role in the Japanese economy. The importance of main banks as sources of finance for larger Japanese firms has declined as their relative capital requirements have diminished following the catch-up phase of rapid Japanese growth and as internationalization has progressed. Most additional borrowing has come from non-main banks. These facts combine to suggest a diminishing role for main banks in terms of corporate finance for large firms. On the corporate governance side total bank ownership of shares has risen and the number of dispatched managers has risen. This seems to reflect increased share ownership by non-main bank financial institutions and the substitution

of managers for distress lending by main banks. Far from suggesting improved bank monitoring of loans they may be suggestive of more dispersed ownership of stocks and actual control loss by main banks. The aftermath of the bubble economy has further weakened bank-firm relations by highlighting how bank ownership of stock involves the risk that falling stock prices may cause bankruptcy as this important class of bank assets decline in value. Lessening influence in corporate finance and corporate governance seems likely to continue as the Japanese economy matures further, internationalization progresses and the fallout from the bubble economy encourages a greater distance in bank-firm relationships.

## 3. Japanese Inter-Corporate Relationships

Inter-corporate relationships in Japan are very distinctive. We inquire into the nature of recent changes in the structure of the Japanese economy and its inter-corporate relationships, especially those changes associated with the 'production Keiretsu'. Much of our discussion is with reference to the automobile industry, the typical example of an industry exhibiting Japanese inter-corporate relationships (see Aoki, 1988).

Since 1973, the manufacturing industries, such as automobiles and electronics, have been important in the Japanese economy. It has been argued that the competitive difference between the Japanese and US automobile industries is a factor in the unbalanced trade between Japan and US. Table 12 shows the statistics on exports and imports of automobiles from 1980-96: import volumes in 1996 are about 10% of export volumes. Observers have attributed much of this superior performance to the Japanese automobile subcontracting system. Japanese-type inter-corporate relationships are thought to be a source of international competitive advantage (Dertouzos et al., 1989, and Womack et al., 1990).

In what follows we examine the production Keiretsu system whereby groups of affiliated companies, linked by cross-shareholdings, work as Japanese-type inter-corporate relationships. Keiretsu are based on continuous horizontal and vertical relationships (Kobayasyi, 1958). There are three types[20]: the supplier system and the distribution system both of which should be regarded as types of vertically integrated organization; and the enterprise groups, which should be regarded as a kind of horizontally integrated relationship.

Supplier systems exist in machine manufacturing industries like the automobile and electronics industries. Customer (purchaser) firms make finished products by assembling various parts, and suppliers deliver parts to customer firms within the context of a long-term business relationship. The trading relationships between the buyer and supplier firms are neither market nor internal exchange but a kind of intermediate or quasi-integrated organization. Keiretsu structure is hierarchical, having primary subcontractors, secondary subcontractors and tertiary subcontractors etc. Such hierarchical relationships are illustrated in Figure 1 for a typical automobile manufacturer.

Distribution systems are observed in cosmetics, consumer electronics, and automobile industries. They reduce transaction costs in the distribution sector, thereby maximizing the collective profits of the member firms by closed and exclusive relationships.

Business groups, including the descendants of pre-war 'zaibatsu' conglomerates, as well as others of more recent vintage, engage in cross-shareholding and exclusive business relationships. They consist chiefly of large enterprises, collectively known as horizontal Keiretsu groups.

As the supplier system is the most important system, we will concentrate our discussion on this system. The supplier system, such as at the car maker Toyota, is the origin of the 'just in time' production system. At

the stage of development of new products, buyer and supplier firms work together, at the so called 'design in' stage. At the stage of mass production, subcontractors supply their parts to customers satisfying the quality, quantity, delivery time and place of delivery criteria specified by the customers. We shall examine this system in more detail in what follows.

### 3.1. The features of Japanese inter-corporate relationships

The main function of the supplier system is to overcome asymmetric information. By maintaining continuous business relationships with suppliers, a customer company can maintain good quality information about the ability of the supplier to meet quality and delivery time standards. This enables a customer company to reduce production and transaction costs. On the part of suppliers, investments to meet the need of a particular customer make it possible to lower costs. As these investments do not always meet the needs of other customers, they have sunk costs. Therefore, long-term trade relationships are individually and collectively rational for both the customer and the supplier and allow technology transfer between each other through the mutual exchange of a wide range of information.[21]

The above inter-firm relations imply better information, long-term sharing and better economy-wide information flows between large and small companies. Thus, the features of Japanese-type inter-corporate relationships, characterised as vertically quasi-integrated 'Keiretsu' are as follows. The ratio of value added in-house to total sales is low but the numbers of outside makers (subcontractors) per enterprise (purchaser) are small. The structure is hierarchical. The inter-corporate relationships are continuous and long-term depending on an obligational contractual relationship (Sako, 1992) which is encouraged by a high context society (Hall, 1977). Relationships tend to develop a collaborative strategy for

the exchange of technology/know-how. Thus the organisational structure is flexible.

The advantages of Japanese-type inter-corporate relationships (for the customer firm and its supplier) are: reduced supply and demand side risk; shared information about manufacturing technology and R&D; improved investment incentives for relationship specific assets; increased flexibility of response to changing design and delivery specifications; improved internal efficiency through the ability to exploit high powered incentives in supplier firms; and technological advance and cost reduction via learning effects based on a continuous long-term transaction relationship facilitated by the development of relation-specific skills (Asanuma, 1989).

The basic characteristics of Japanese business administration are the managing of firms from a long-term viewpoint and the sharing of profit/risk with partner firms. Thus related firms tend to divide profit and risk with each other into the future, because they regard their long-term situation as more important than their short term performance. There are a number of reasons for this. First, the composition of shareholders includes a high percentage of corporate shareholders, whose share is usually higher than that of individuals. The ratio of dividends to profits is apt to be low and not related to profits, and corporate shareholders commonly prefer long-term growth of the undertaking to a short-term rise in the stock price. Second, in employment relationships, Japanese enterprises invest in human resources by such means as OJT (on-the-job training) on the basis of long-term management costs. Employees are usually willing to cooperate in furthering the aims of the enterprise. They are loyal to their enterprises in exchange for a commitment to lifetime employment and seniority wage rises, especially in large enterprises. Third, there are similar mutually beneficial arrangements in inter-corporate governance. As a result firms trust each other (Sako, 1992), sharing profit and risk. This is a spur to the adoption of a flexible

response to changing opportunities. Thus Japanese companies have been managed from a long-term point of view.

### 3.2. Structural change in the Japanese economy and inter-corporate relationships

In the 1980s, the Japanese economy underwent structural adjustment. The internationalization of the economy, an aging population, technological innovation, the emergence of an information-oriented society, the growing importance of soft and service sectors, and deregulation have all put pressure on the economy for structural adjustment. Of all these factors, the internationalization of economy has most affected inter-corporate relationships. Following the Plaza Accord of September 1985 there has been particular pressure for change in manufacturing, especially in such industries as automobiles and electronics[22]. Many companies have undertaken foreign direct investment as a way of coping with the high value of the yen. Meanwhile the US required that Japan force its automobile makers to purchase various parts from outside of their Keiretsu. As a result, Japanese automobile makers purchased parts from US to the value of $22.7 bn in fiscal year 1996, 10 times the 1986 figure[23]. Thus, many companies have purchased parts from global markets as a result of both forced and exchange-rate induced internationalization of the Japanese economy. Japanese firms have had to re-examine their supplier system, which has been criticized as an exclusive system. However even though imports have grown rapidly, import penetration remains low.

External pressure on the Japanese economy has led to pressure on the supplier system. Many customers have required lower costs, improved quality control, shorter delivery times and more specialist technology than in the past. In particular, customers increasingly value the ability of suppliers to deliver product and technical development. The purchasers

have increasingly selected their subcontractors on the basis of short-term self-interest (Small and Medium Enterprise Agency, 1996, pp.83-91).

The Japanese car industry has lost competitiveness since the beginning of the 1990s. This is due to the improving productivity of the US automobile industry, which has introduced 'Japanese' production methods, and improved US competitiveness via the depreciation of the dollar. The Japanese car industry has recovered competitiveness again in 1996 as prior relative productivity and currency trends were reversed. Japanese firms have made efforts to cut down on numbers of parts, to improve standardization, to streamline the R&D process, and to use computer aided design and manufacturing (CAD/CAM) to save design costs. Purchasers have cooperated with suppliers from the beginning of the design stage, in 'simultaneous' engineering. They have begun cooperative relationships earlier at the 'design in' stage (Shimokawa, 1997, p.31). They have put shortened lead times between the product planning stage to the stage of mass production. For instance, Japanese automobile makers have recently developed new cars with a lead time of just 20 months, compared to previous lead times in the industry of 36-40 months (Shimokawa, 1997, p.31).

These changes have involved severe competition between parts makers, not only between primary subcontractors but also between secondary and tertiary subcontractors. The reason for this would seem to be that the cost advantages of switching suppliers has begun to outweigh the transaction cost advantages of long-term buyer-supplier relationships as imports became cheaper and rapid technical progress widened differences in efficiency between the best and the worst firms.

### 3.3. Inter-corporate governance and relational goods

The reason why there is rationality and efficiency in inter-corporate relationships is that customer and supplier are able to find a common

source of growth opportunities (Astlay and Fombrun, 1983, pp.205-228). In other words, inter-corporate relationships allow the improvement of both corporations' capability (Badarracco, 1991). We can describe such relationships as involving the exchange of relational goods (Takada, 1997). Superior relational goods are embodied in the exchange and transfer of technology, information and other resources, but also have the effect of stimulating firms to improve their internal organization via inter-corporate learning. 'Design in' and the 'simultaneous engineering' are examples of such processes. To create relational goods, both enterprises must first have superior management resources and competence. Second, their resources must complement each other's. Third, each enterprise must have a capacity for self-learning in order to improve its capability. 'Relational goods' give rise to 'relational quasi-rent' (Aoki, 1988) and 'relational rent' (Asanuma, 1987). Aoki insists that there arise group-specific economic returns attributable to relational cooperation between the prime manufacturer and its subcontractors, just as the mutual commitment of the employer and the employee is the source of the organizational quasi-rent. He calls such returns relational quasi-rent in the sense that it is generated by the unique informational efficiency of relational contracting in the subcontracting group. Asanuma insists that economic returns are created within a continuous transaction. He calls such returns relational rent. He mentions that relational rent is generated by customer's and supplier's offering factors: i.e. advantages of relationship compared to best alternative relationship. Customer's offering factors are the ability to differentiate between suppliers and the ability to specify the various parts required. And supplier's offering factors are: the quality, the level of cost and the exact delivery of the product; the capability to generate process innovations; the ability to make proposals in the improvement of product design; and the ability to undertake product innovations (Asanuma, 1987).

Takada (1997) also suggests that relational goods cause improvements via facilitating continuous inter-corporate learning, in addition to the concept of relational quasi-rent and relational rent. Therefore the concept of relational goods is a dynamic one. Thus, the rationality and efficiency of inter-corporate governance depends on their superior relational goods; the level of accumulated management resources and the level of competence embodied in them; and the ability for self-learning, improvement and innovation in management resources.

These factors generally are held by larger rather than smaller enterprises. Therefore, the theoretical model of power dependence (Pfeffer and Salancik, 1978) is an alternative explanation about the inter-corporate governance of these smaller enterprises. There have been many discussions about the rationality and efficiency of the long-term and continuous relationships characterized as 'Japanese' inter-corporate governance. For instance, Helper (1990) has sought economic and historical explanations of the differences in structure and performance of US and Japanese automotive subcontracting, using the conceptual framework based on Hirshman's (1970) distinction between 'exit' and 'voice'. Much of the superior performance of Japanese automakers has been attributed to their subcontracting system, an arrangement based on long-term relationships with suppliers, involving a great deal of information exchange, joint problem solving and governance by trust. Furthermore, Helper and Levine (1992) have pointed out that relationship-specific rents develop into product-market rents, using the concept of Asanuma's relationship-specific skill. And Odagiri (1992) has argued that in an environment of technological competition modern competitive relations are long-term and evolutionary depending on voice relationships with optional exit relationships and earning rents from superior relative assessment techniques (i.e. technical advantages).

Most enterprises now compete on the basis of technology, relational assets and specific skills (Asanuma, 1989), and in these circumstances

continuous long-term inter-corporate relationships are rational and effective. Hence, many enterprises will be effectively governed by voice relationships, having the option of exit. In other words, specific assets and relationship-specific skill are fostered by continuous long-term relationships, and many firms are apt to exhibit voice behavior, because exit behavior will involve sunk costs. These continuous long-term relationships rely on implicit contracts and cooperative relationships governed by a reputation mechanism and the avoidance of moral hazard by long-term monitoring. Continuous long-term relationships rely on multilateral competition, i.e. competition on quality, delivery, flexibility, after sales service as well as cost.

Relational goods in inter-corporate relationships are closely linked to continuous long-term relationships. But even if relational goods are generated in inter-corporate relationships, we should think about how the rents associated with them are distributed. Aoki (1988, p.218) has argued that relational quasi-rent is generated by the unique informational efficiency of relational contracting in the subcontracting grouping, and its distribution between the prime contracting firm and supplier firms within the subcontracting group. He argues that larger firms in the subcontracting group have gained an increasingly larger proportion of the relational quasi-rent, while the bargaining power of smaller firms within the group has been declining. And he has pointed out that the current structure is characterized more by fine gradational stratification, starting with the coalitional structure of the prime contracting manufacturer at the apex of the subcontracting group and going down to that of upper tier subcontracting firms of relatively stronger bargaining power to the near-competitive system at the lowest tier. Therefore, according to his thesis, the prime manufacturer absorbs a proportion of contract-specific risk, acting as a partial insurer for lower tier, risk averse subcontractors, extracting a larger portion of the relational quasi-rent as a sort of insurance premium (Aoki, 1988). In short, according to him, risk premium relates to the distribution of relational quasi-rent. But the

prime contracting firms have their direct relationships with primary subcontractors, and they have not got direct relationships with lower than secondary subcontractors. Aoki does not explain how relational quasi-rent and the insurance premium will be distributed between them in their indirect relationships.

### 3.4. The changing nature of Japanese inter-corporate relationships

The modern Japanese economic structure has fine gradational stratification and hierarchy[24] (see Figure 1). In this structure implicit relationships based on continuous long-term and mutual trust relationships will be apt to be convenient to the strong-side of the relationship, reflecting the differences in the management resources between enterprises. Japanese inter-corporate relationships are under increasing pressure. First, companies holding a dominant position are likely to abuse their power. This is more likely in an international context where traditional Japanese trust norms do not apply. Second, relations based on close negotiation and information exchange involve high communication costs such as those arising from long working hours. Third, potentially qualified suppliers will need to invest in specific assets to enter new markets. These sunk costs create entry barriers. Fourth, Japanese-type inter-corporate relationships need multilateral competition in order to facilitate price competition. Nowadays business activities of Japanese companies must be open to international competition and be seen to be open to such competition.

It is difficult for Japan to maintain Japanese-type inter-corporate relationships in an environment of increasing internationalization, where modern innovation requires increasing flexibility and where demographic changes are reducing the supply of skilled labor. Internationalization is slowly forcing the opening of the supply chain to foreign competition. New industries, such as computer software, find it difficult to keep pace with the rate of technological development via

Japanese-type inter-corporate relationships (Minato, 1997). The aging of the population results in greater competition for skilled labor making it difficult to maintain continuous long-term employment relationships. Flexible labor markets are being developed where there were once differences in the operation of the labor market for employees of small and medium sized enterprises and those of large companies. These trends mean that traditional Japanese-type inter-corporate relationships are likely to decline in importance.

## 4. Japanese Industrial Policy

### 4.1. 'Strong MITI, weak JFTC'

'Industrial policy is defined as the policies that are implemented for raising the welfare level of an economy by restraining competition. It consists of various polices that are designed to attain this objective through intervention in the allocation of resources between industries, or in the industrial organization of individual industries'[25]. It is well known that there have been such policies in most manufacturing industries in Japan since the Second World War. At the same time there has been a formal competition policy (defined as the policies that regulate anti-competitive behaviors in order to attain economic efficiency of resource allocation through the market mechanism). As industrial policy exists at least partially to restrain competition and Japan has a superficially tough anti-monopoly law dating from 1947, it is necessary to pay attention to the relationship between industrial policy and competition policy. Japanese competition policy is administered by an independent administrative agency, the Japanese Fair Trade Commission (JFTC).

The Ministry of International Trade and Industry (MITI), which is the main government agency executing industrial policy, was given broad authority to intervene in various business activities after 1945. It could control business activities directly through import quotas and managing

foreign capital flows during high-growth era[26]. Moreover, it has been able to control firms indirectly by giving pecuniary incentives and undertaking administrative guidance since the end of the war. One reason why MITI could pursue these policy instruments is the existence of various special laws. Using these laws, MITI could promote its objectives avoiding legal conflict with anti-monopoly law. The other reason was the crippling amendments to the 1947 Japanese anti-monopoly law: for instance Japanese anti-monopoly law was amended in 1952 legalizing depression cartels and rationalization cartels.[27] Information exchange between MITI and business firms was facilitated in the process of forming these cartels, and MITI has engaged in industrial policy based on this information exchange. As a result, JFTC was forced to accept a weak position, this is evidenced by the small number of decisions and criminal cases brought by the JFTC[28]. Therefore, 'strong MITI, weak JFTC' has been the common perception in post-war Japan, and pro-active industrial policy was feasible in this context.

In addition many observers have pointed out that there has been a cosy long-term relationship between government and business[29]. The existence of "amakudari"[30] and many official and private deliberative councils suggests a unique system of relationships. Because close long-term contact between government and business facilitates information exchange, MITI could engage in industrial policy based on this shared information.

Prior to the 1980s, MITI executed industrial policy with the objective of 'catching up' with western advanced economies[31]. On the one hand, MITI tried to select industries which would acquire comparative advantage in world markets in the future, and offered support to these selected industries. On the other hand, MITI engaged in adjustment assistance policies toward the declining industries which lost competitiveness in the world market. As many economists observed,

these policies by MITI at least partially contributed to high post-war economic growth in Japan[32].

What mechanism led from industrial policy, though it included anti-competitive measures, to successful performance? Okuno-Fujiwara (1996) and Kanemoto (1996) formulated a model which explains this mechanism[33]. According to them, the relationship between government and business in Japan can be described by the following process:

a Government decides an 'ex ante rule' by negotiating with business sector. Economic actions of firms are shaped by this ex ante rule.
b Given this ex ante rule, private firms carry out their (ex ante) economic actions.
c Uncertainties that are difficult to foresee ex ante unfold.
d Government and private sector negotiate over 'ex post rules' to be implemented after coordinating their interests.
e Some disputes over the validity of the ex post rules may occur among stakeholders. These disputes are settled and lead to 'ex post implementation rules'.
f Private firms take ex post economic actions.

Therefore, 'ex ante rule' means the various rules (or common beliefs) in the light of which business firms undertake their ex ante economic actions. These rules include not only the system of laws but also (ex ante) the discretionary enforcement of the laws. Thus 'strong MITI, weak JFTC' can be interpreted as an ex ante rule in post-war Japan. Economic agents decide their behavior self-interestedly taking account of ex ante rules. However, states of nature which are not specified in ex ante rules may arise. In these situations, the parties effected by them (i.e. government and businesses) must coordinate their activities. This coordination forms ex post rules, in principle based upon ex ante rules[34]. Ex post rules indicate to the parties the behavior that should be followed.

According to the above model, an ex ante rule is formed taking into account ex post rules and/or the possibility of disputes. Therefore, when inconsistency between ex ante and ex post rules emerges significantly under an ex ante rule, this ex ante rule is no longer enforceable. This causes the ex ante rule to be changed. We will see later in this section that this kind of inconsistency explains the change in Japanese industrial policy after the 1980s.

The machinery and information industries provide a good example of the pattern of policy development described above. During the 1960s and 1970s MITI supported a policy of catch-up in these industries via low tax rates and cartels exempt from anti-monopoly law. However in the 1980s these industries were the subject of trade disputes and internationalization and the exemption from anti-monopoly law no longer applies. Thus we see the ex ante rules (low taxes and legal cartels) in this industry being changed over time as they became unsustainable.

We have identified an ex ante rule as 'strong MITI, weak JFTC'. Under this rule, both MITI and business firms could act without considering anti-monopoly law in many situations. This was because MITI could require the enactment of a special law in order to promote its policy goal of catching-up with western economies. We also note the institutional characteristics of MITI: as Aoki (1988) described, organization of MITI is divided into two types of bureaucratic entity (see Figure 2): "Genkyoku (original bureaus)", which has a clearly delineated jurisdiction over industries, and "Chosei-kyoku (coordinating offices)", whose main duty is to coordinate budgets and plans etc. over "Genkyoku". So, "Genkyoku" intervene in industries in accordance with policy goals and in order to raise the probability of "amakudari". Meanwhile, business firms have an incentive to accept the intervention of MITI. Sometimes this is because of the prospect of subsidies and tax reductions. At other times, they are forced to be controlled because of

the fear of future retaliation by MITI. Therefore, both MITI and businesses have had incentive to cooperate with each other and to make ex post rules.

The close contact between MITI and business often led to effective information exchange. Business firms could expect MITI support for their catching-up process. Furthermore, they could also rely on MITI support for them in times of financial crisis, because they knew that the responsibility for policy intervention rested with MITI and that MITI wants to ensure positions for "amakudari". In this situation, business firms undertook enormous investment programmes in the post-war period. This has caused 'excessive competition' in many industries during the catching-up era and Japanese post-war growth was achieved by this sort of fierce competition[35].

Table 13 shows that MITI's budget as a percentage of government expenditure is low. This is because as Boltho (1985) observed, Japanese industrial policy is characterized not by 'visible' policy instruments (e.g. subsidies and tax) but by 'invisible' instruments (e.g. administrative guidance and indicative command).

## 4.2. Internal and external 'shocks' affecting industrial policy

The twin shocks of the completion of catch-up with other western economies and growing internationalization seem to have resulted in a change of the ex ante rule. Although there are difficulties in measuring the degree of catching up, we can use the value of technology exchange as measure of technological catch-up. Figure 3 shows annual balance of trade on technology. The annual surplus of exports over imports on technology increases gradually, although it fluctuates sharply. Therefore, this figure indicates that Japanese technological catching-up process was nearly completed by the 1980s[36]. As a result of this success in achieving

its primary policy objective, MITI has been forced to diversify its policy goals, in order to give itself a rationale.[37]

The second "shock" - internationalization - weakened the strength of MITI's role via two mechanisms. First, internationalization of the Japanese economy has arisen as a result of the increasing share of exports and imports in GDP, the business activities of domestic firms active in foreign direct investment and the entry of foreign firms into the Japanese market. Because MITI's policy instruments mainly targeted domestic business firms, internationalization reduces the strength of policy instruments. Second, internationalization has led to trade disputes between Japan and western countries (especially the US)[38]. Trade disputes entailed not only opposition to rapid expansion of exports by Japanese firms but also the requirement for the reformation of Japanese industrial structure (see the previous section). This requirement substantially weakened MITI's willingness to use its policy instruments.

MITI's changing role in industrial policy is represented by the decline of authorities to control industries. Figure 4 shows number of cartels permitted as exemption from anti-monopoly law. After the late 1970s number of cartels decreases drastically, reflecting the decline of MITI's role. As a result, the number of manufacturing industries regulated by special law is also decreasing (Table 14).

Meanwhile, anti-monopoly law was considerably strengthened in 1977. One result of this amendment was that business firms may be fined proportionally to profit in the case of unreasonable restraint of trade, and hence be deterred from anti-competitive behaviors[39]. In addition to this, there is increasing foreign pressure to strengthen the enforcement of Japanese anti-monopoly law. The number of investigations and the real value of fines, though it fluctuates sharply, shows an increasing trend (Figure 5 (a) and (b)). More interesting is the observation that the real value of fines in the case of unreasonable restraint of trade increases

drastically after 1990. Therefore, the role of JFTC has been raised since the 1980s. This suggests that the ex ante rule 'strong MITI, weak JFTC' has changed in the 1980s. As an indicator of the growing relative importance of the JFTC, Table 15 shows the increase in the numbers of civil servants in the JFTC relative to MITI. OECD (1997) reports further moves to increase the effectiveness of the JFTC.

The above factors – completion of the catch-up process and internationalization – are sufficient to explain the decline of MITI's power and the increase of the JFTC's power. The reason why MITI has relinquished power is the loss of its ability to commit to its former policies. As we have already shown above, this ability has been supported by the formal and/or informal authority of MITI. MITI had authority to ration foreign currency during high-growth era, and to permit, for example, entry into various industries by special laws and 'administrative guidance' based on the ex ante rule. In this environment, MITI was able to pursue its policy goals by additional use of its 'invisible' policy instruments. However, completion of the catch-up process and internationalization increases the uncertainties associated with committing to its various industrial policies. In terms of the our previous analysis, this phenomenon creates inconsistency between ex ante rules and ex post rules. When this sort of inconsistency is severe, we should expect a change of ex ante rule. The above factors have promoted the breakdown of the 'strong MITI, weak JFTC' rule in the Japanese economy.

### 4.3. 'Strong JFTC, weak MITI'?

As we have noted above, the achievement of catch-up with western economies diversified the policy goals of industrial policy. In this situation, it is necessary to coordinate more extensively the various plans presented by "Genkyoku". This type of coordination is time-consuming as MITI must make extensive contacts with businesses. Thus ex post

information exchange costs appear to have risen. In addition to this, increased uncertainty about MITI's ability to pick 'strategic industries' due to the achievement of catching-up also contributes to rising costs of intervention.

A more important impact is the tendency to change ex ante rules. This change of ex ante rules – due to the decline of the role of industrial policy and the strengthening of competition policy – creates inconsistency between the ex ante rules and the ex post rules. This sort of inconsistency increases the probability that ex post rules are not credible. If this is the case, the firm may not have incentives to cooperate with government in order to preserve an ex post rule through information exchange.

Such inconsistency may lead to a 'hold-up problem'[40]. For example, if a firm that is considering making an investment knows that its decision to invest may be altered through ex post information exchange, it may hesitate in investing. When the 'hold-up problem' is serious, the inconsistency between ex ante and ex post rules tends to reduce aggregate investment. In these circumstances, ex post information exchange, is not only privately costly but also socially wasteful.

For the above reasons, information exchange between MITI and business has become a more costly and less beneficial activity since the late 1970s. To preserve traditional ex post rules, it is necessary for MITI to commit to influence common beliefs. However, as we have noted in the above discussion, MITI has lost the authority to control industries. So, MITI is no longer able to make ex ante commitments and hence Japanese industry policy has become much weaker than in the past.

## 5. Conclusion

Even before the onset of the Asian economic crisis of 1997, the years since 1985 have witnessed a period of significant institutional change in the Japanese economy.

A number of factors have coincided to cause this change. First, the Japanese economy has substantially caught up with western economies thus reducing the scope for 'easy' growth. Second, the 1980s were a time of global macroeconomic instability emanating initially from US domestic economic policy which eventually led to the emergence of a persistent US-Japan trade deficit and a sharp appreciation of the yen against the dollar. This macroeconomic stability led to two recessions within 6 years in the Japanese economy. Third, macroeconomic instability was associated with growing political pressure on Japan from the US to liberalize its domestic markets in order to facilitate imports. Finally, an aging population and changes in industrial structure increased competition between firms for skilled labor within the Japanese economy. These last two factors have put pressure on the system of stable inter-corporate relationships along the industrial supply chain.

In our discussion the above factors were seen to have important implications for the three institutions we examined. First, long-term relations between banks and firms are increasingly fragile, ineffective and difficult to sustain. The Japanese Finance Ministry recently put the value of the banking systems bad loans at 79 trillion Yen (*The Economist*, 20th December 1997, p.95) and in October 1998 the government unveiled a 67 trillion Yen support package for the banking system[41]. These financial consequences of the bubble economy suggest a failure of the bank's monitoring function. While banks will undoubtedly continue to be significant lenders to industrial companies it is already apparent that a move towards a more Anglo-American (arms length) sort

of bank-firm relationship is underway. Second, inter-corporate relations within the production Keiretsu are being undermined by competition for resources, internationalization and external pressure to liberalize markets for components. If Japan is to respond to international political and economic pressure in high technology industries it will have to develop more flexible forms of purchaser-supplier relations. Third, industrial policy has undergone a marked shift as MITI has declined in importance and influence and the JFTC has undertaken a more extensive and proactive role in enforcing competition. This switch in the stance of government policy towards industry would seem to be an irreversible trend in a world moving towards ever freer trade between developed countries.

## Notes

1. Nominal asset prices have fluctuated wildly: taking a base of 100 for both stock and Tokyo land prices in 1985, stock prices reached 260 in 1989 before falling to below 140 in 1992, while land prices in Tokyo reached 220 in 1990 before falling to 180 in 1992 (Table 1.1). The external sector has seen the value of the yen dollar exchange rate drop from 250 Y/$ in 1985 to around 100 Y/$ in 1996 (Table 1.2) while a persistent current account surplus has emerged accompanied by a sustained growth in the dollar value of net overseas assets. Between 1985 and 1996 Japanese GNP growth has fluctuated sharply and unemployment has risen to a record post-war high (Table 1.3). Since 1996 the economy has stagnated and unemployment has continued to rise.

2. In the 5 decades since the end of World War II, the Japanese economy has developed rapidly. Part of this was a catch-up phase of economic development which took place within the framework of unique systems and practices which have come to be known as 'the Japanese economic system'. The chief features of this system are: a financial intermediation system centered around 'main' banks and lead underwriters; seniority-based pay and long-term employment; inter-corporate relationships, involving a closely linked group of firms, known as 'Keiretsu'; and minute government regulation covering a wide range of economic sectors (Economic Planning Agency, *Economic Survey of Japan*, 1996).

3. See, for example, Noguchi (1993).

4. See Yoshitomi (1996).

5. See Nakamura (1988, p.174).

6. Source: *Nihon Keizai*, Nyumon, Nihon Keizai Shinbunsha (1995, p.103).

7. Teranishi (1994, pp.66-68) gives information on 114 firms for which 130 loan syndicates existed at the end of June 1941. The outstanding amount of loans was 1,724 million yen, 8.9% of total lending of the banking system. Number of companies by type of Managing Bank: 71 The Industrial Bank of Japan (IBJ), 5 IBJ and trust and other banks as managers, 16 other banks and 22 Trust companies. The extent of IBJ involvement is impressive: one reason for this is that the IBJ was regarded as a strategic bank financing the war economy; another is that the IBJ had been playing a leading role in corporate bond syndication, and some of its loan syndications began as bridging loans when the underwriting did not go smoothly.

8. See Itoh (1995, p.141).

9. Source: Economic Planning Agency, *Economic Survey of Japan* (1993, p.75).

10. Settlement account refers to the non-interest bearing settlement accounts ('Tozayokin' in Japanese). Firms have them with commercial banks for the purpose of managing cash-flow receipts and payments, in particular the settling of payments of cheques and promissory bills.

11. For a survey see Horiuchi and Zui (1992). Hoshi, Kashyap and Scharfstein (1991) estimated the impact which the cash-flow and the amount of short term securities owned has on equipment investment. Their study indicates that investment by firms is dependent on the amount of its internal funds but the limit from internal funds is weaker when firms belong to Keiretsu, thus

having a close relationship with a bank. Oba and Horiuchi (1990) specified the main bank relationship more clearly. They evaluated how the amount of loans, the ratio of stocks owned by the bank and the number of dispatching managers influenced equipment investment. They show that co-relationship among three variables is low and that it is difficult to express to what extent the relationship between the bank and the firm is strong by reference to just one variable.

12. Horiuchi and Zui (1992) put the reason for this as follows: 'There also seem to be reciprocal incentives for concerned parties to diversify loan relationships. On the firm's side, there may be the fear that reliance on a single bank for investment financing may encourage the bank to intervene in the management of the firm. By diversifying loan sources, the firm's management may be able to retain the option of switching the main bank relationship to another bank if the incumbent main bank becomes too meddlesome. On the main bank side, an exclusive loan relationship may be difficult to terminate, even when it is more efficient to do so. By limiting its own loans to a minority share of total lending to a given client firm, the main bank may be able to avoid being completely captured by the interests of the firm and to leave open the option of abandoning failing firms if necessary'.

13. Sheard (1994) details 42 cases covering a 30-year period. Of these cases, 19 are from the high growth period, 9 are from the period of slow-down in economic growth and adjustment to the oil-price hikes from the mid-1970s, and 14 are recent ones in the wake of the bursting of the asset bubbles since the late 1980s. Example cases are Sanko Steamship (overseas shipping 1982, main bank: Daiwa), Japan Line (overseas shipping 1978, main bank: Industrial Bank of Japan), Kanematsu-Gosho (trading company 1977, main bank: Tokyo).

14. Under the Regulation law of Foreign Exchange and Foreign Trade (common name 'Gaitameho') external transactions are freed from regulation, prior to the passing of this law the Law in principle prohibited external transactions, but allowed exceptions. Effective foreign exchange control existed.

15. Source: Economic Planning Agency, *Economic Survey of Japan* (1993, p.76).

16. Source: *Economist*, Toyo Keizei Shinposha, 1995.5.8.

17. See Dodwell Marketing Consultants (1994, p.13).

18. The 1960 recession was relatively severe, but not as severe as the recent recession. When the 1960 recession occurred, one of the biggest security companies, named *Yamaichi Shoken*, experienced financial distress. At that time, Bank of Japan supported the company with special aid to prevent a financial crisis arising from a chain reaction. As a result no bank went bankrupt and there was little change in the main bank system.

19. Source: Economic Planning Agency, *Economic Survey of Japan* (1996, p.305).

20. Source: Economic Planning Agency, *Economic Survey of Japan* (1996, p.336).

21. Source: Economic Planning Agency, *Economic Survey of Japan* (1996).

22. See for example Kosai (1996).

23. Japanese automobile makers in US purchase automobile parts not only from US manufacturers but also from Japanese part-makers in the US following substantial Japanese investment in the US (Japan Automobile Manufacturers Association, 1997).

24. See, for example, Takada (1989, pp.90-101) and (1990, pp.23-35).

25. See Itoh, Kiyono, Okuno-Fujiwara and Suzumura (1991, p.8).

26. This authority was supported by Foreign Exchange and Foreign Trade Control Law (1949) and Law concerning Foreign Capital (1950).

27. See Best (1990) for an account of the early development of MITI and the JFTC.

28. See Table 16 and Martin (1994, p.190).

29. For example, see Johnson (1982), Boltho (1985), Aoki (1988) and Okimoto (1989).

30. By this unique custom, retired civil servants can often find important positions in business firms and/or public-service corporations. OECD (1997, p.103) notes that the number of 'amakudari' peaked at 318 in 1985 and has fallen to 134 in 1996.

31. See, for example, Boltho (1985) and Itoh, Kiyono, Okuno-Fujiwara and Suzumura (1991). It has been pointed out that catching-up western countries had been largely achieved by the 1970s. However, MITI supported joint research in the computer industry in order to catch-up technological level of IBM during 1970s.

32. See Johnson (1982), Hills (1983), Boltho (1985) and Itoh, Kiyono, Okuno-Fujiwara and Suzumura (1991).

33. See also Aoki (1988).

34. Sometimes, ex post rules may be specified which contradict ex ante rules. In this case, this ex ante rule may be changed by revision of law. We can illustrate such a case with the revision of the 'law concerning large-sized retail stores' (see Tsuruta and Yasaka, 1991, and Kanemoto, 1996).

35. According to this view, as Boltho (1985) pointed out, it is very important that MITI preserved competition among a few big firms in most industries.

36. Economic Planning Agency, *Economic Survey of Japan* (1996) insists that Japanese catching-up process was complete by 1990 using annual per-capita GDP.

37. According to MITI (1990), its industrial policy goals in 1990s are the following: (1) international harmonization, (2) improvement of quality of life, (3) preparedness of infrastructure for economic growth.

38. See Itoh, Kiyono, Okuno-Fujiwara and Suzumura (1991).

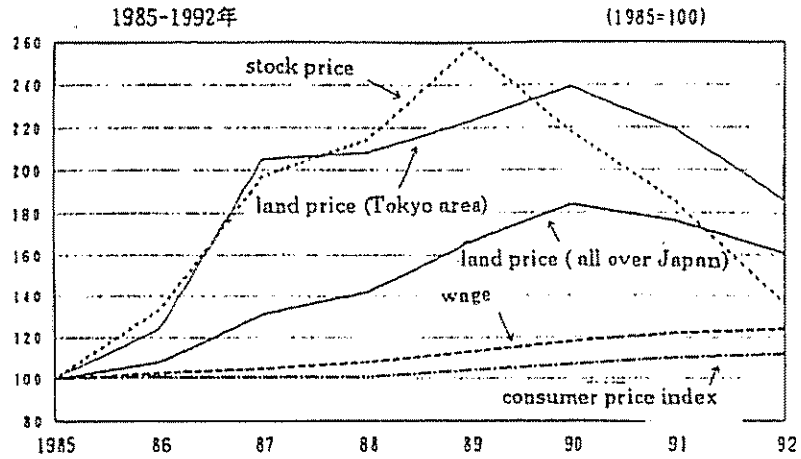
39. See Martin (1994) and Kisugi (1995).

40. For the 'hold-up problem', see Williamson (1985) and Milgrom and Roberts (1992).

41. See P.Abrahams and G.Tett, 'Political deal paves the way for Tokyo banks rescue', *Financial Times*, 13 October 1998, p.22.

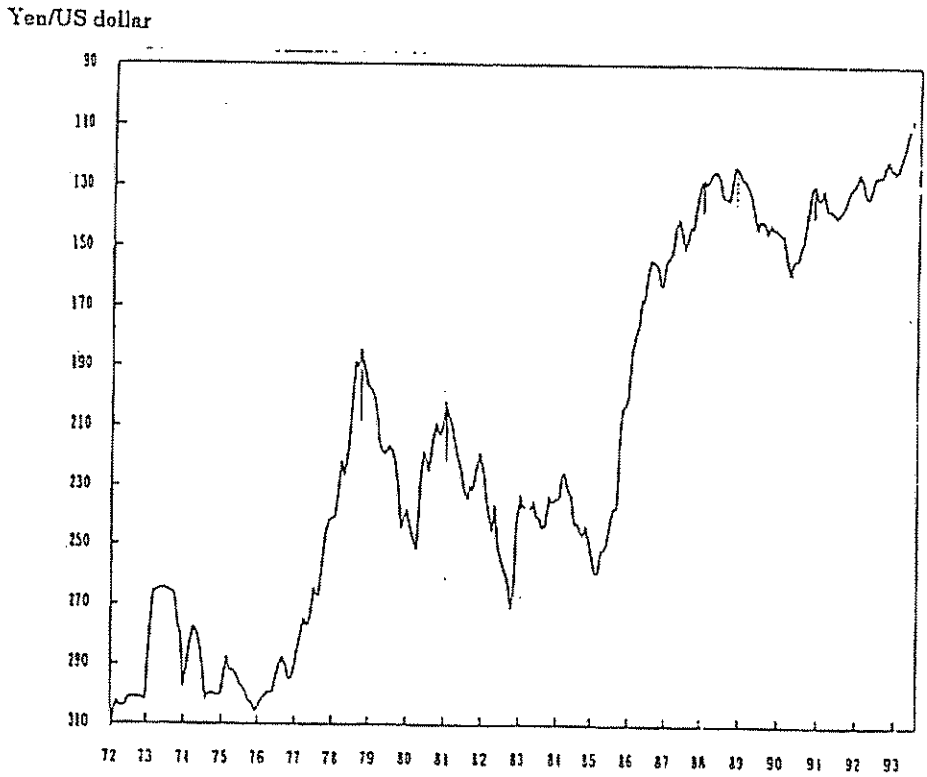
# TABLES AND FIGURES

**Table 1.1 Change of Land and Stock Prices**



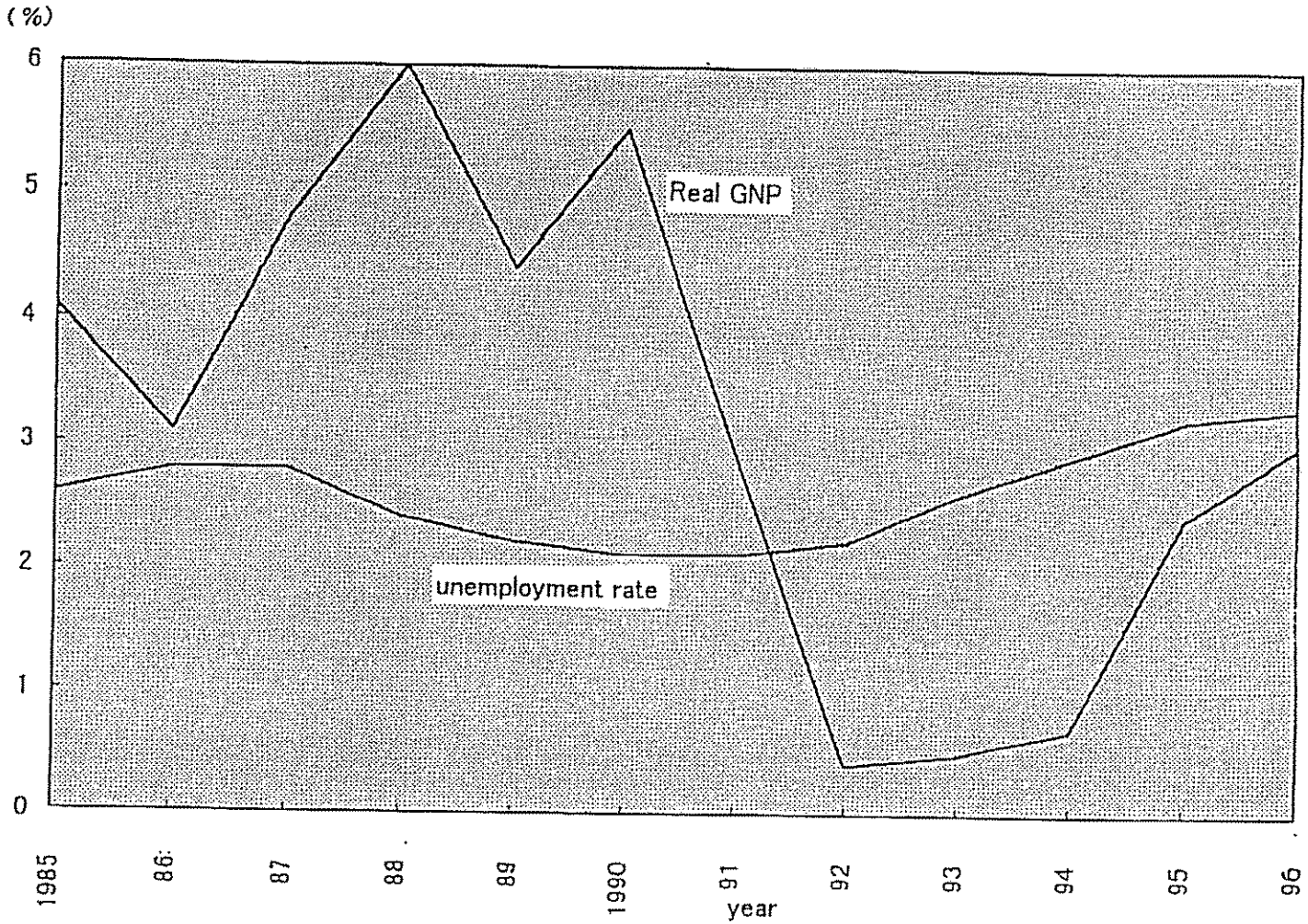

Source: Economic Planning Agency, *Economic Survey of Japan (1992-93)*, Japanese Version, p.153.

**Table 1.2 Nominal Yen US Dollar Exchange Rate**




Source: Economic Planning Agency, *Economic Survey of Japan (1992-93)*, Japanese Version, p.271.

**Table 1.3 Real GNP, Unemployment 1985-96 (annual change of rate)**




Source: Economic Planning Agency, Reference Materials in *Economic Survey of Japan (1996-97)*, Japanese version, p.5, 14.

**Table 2 Inter-relationship between bank lending and shareholding 1992**

| *Bank* | *Number of listed firms for which bank has largest loan share* | *% of these firms for which bank's rank as shareholder is:* *1st* | *2nd-3rd* | *4th-5th* |
|---|---|---|---|---|
| Mitsubishi | 154 | 8.4 | 40.3 | 29.2 |
| Sumitomo | 148 | 4.1 | 37.1 | 33.1 |
| Dai-ichi Kangyo | 191 | 5.8 | 45.5 | 23.0 |
| Fuji | 158 | 7.0 | 49.3 | 27.9 |
| Sanwa | 136 | 8.1 | 43.4 | 23.5 |
| Sakura | 189 | 7.4 | 31.8 | 32.2 |
| Industrial Bank of Japan | 189 | 8.2 | 37.4 | 22.8 |

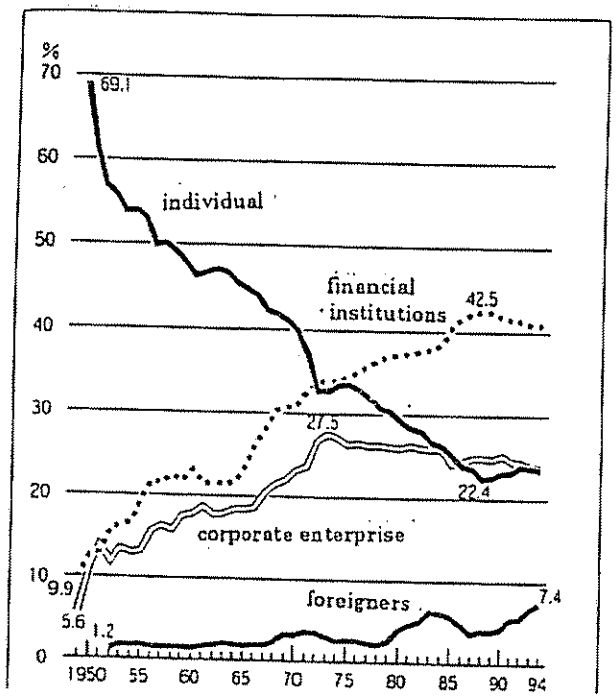
Source: OECD (1996, p.161).

**Table 3. International Comparative Structure of Corporate Finance of Non-Financial Corporate Firms (a flow of funds base).**

| | Japan | | | | USA | | | |
|---|---|---|---|---|---|---|---|---|
| | Internal funds | External funds | Borrowing | Securities | Internal funds | External funds | Borrowing | Securities |
| 1962-64 | 39.4 | 60.6 | 46.6 | 11 | 76.9 | 24 | 11.3 | 7.9 |
| 65-69 | 50.1 | 49.9 | 43.2 | 5.6 | 67.9 | 32.1 | 18.8 | 13.9 |
| 70-74 | 41.6 | 58.4 | 50 | 5.7 | 55.1 | 44.9 | 25.6 | 18 |
| 75-79 | 50.6 | 49.4 | 41.5 | 7.5 | 69.7 | 30.3 | 16.3 | 14 |
| 80-84 | 59 | 41 | 35 | 6.2 | 74.2 | 25.8 | 15.5 | 9.5 |
| 85-89 | 52.3 | 47.7 | 32.1 | 11 | 85.4 | 14.6 | 14 | -1.3 |
| 90-95 | 72.3 | 27.7 | 26.2 | 6.7 | 76.5 | 67.6 | 0.85 | 8.1 |
| | UK | | | | Germany | | | |
| | Internal funds | External funds | Borrowing | Securities | Internal funds | External funds | Borrowing | Securities |
| 1962-64 | 73.2 | 26.8 | 16.5 | 10.3 | 66.5 | 33.5 | 22.8 | 5 |
| 65-69 | 74.1 | 25.9 | 14.6 | 11.3 | 68.8 | 31.2 | 20.8 | 4.1 |
| 70-74 | 62.2 | 37.8 | 34.2 | 3.6 | 58.5 | 41.5 | 28.1 | 3.2 |
| 75-79 | 79.1 | 20.9 | 16.4 | 4.5 | 72.6 | 27.4 | 22.3 | 1.6 |
| 80-84 | 82.5 | 17.5 | 16.3 | 1.2 | 75.4 | 24.6 | 21.6 | 3 |
| 85-89 | 63 | 37 | 26.1 | 10.9 | 78.6 | 21.4 | 16.5 | 4.9 |
| 90-95 | 52.1 | 43 | 7.2 | 4.4 | 88.2 | 37.1 | 26.7 | 4.4 |

Source: From 1962 to 89, Economic Planning Agency, *Enonomic Survey of Japan (1991-92)* Japanese version, p.247, from 1990 to 95, Bank of Japan, *Comparative Economic and Financial Statistics, Japan and Other Major Countries,* 1995, p.71, 1997, p.53.

**Table 4 The Component of Stock Owners**




Source: *Kigyo Keiretsu Soran*, Toyo Keizai Shinposha, 1996, p.96.

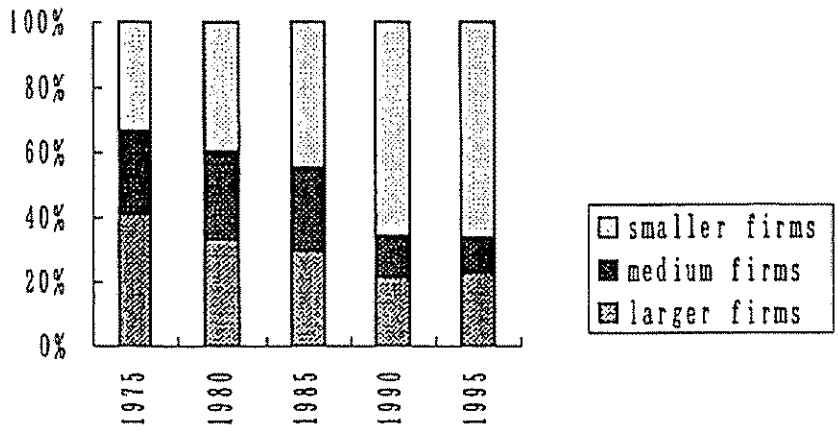
Note: The number of stocks owned base.
Investment trusts are excluded in financial institutions.

**Table 5. Demand and Supply of Corporate Funds of Larger Manufacturing Firms (%)**

| (Fund raising) | 1966-69 | 1970-74 | 1975-79 | 1980-84 | 1985-89 | 1990-95 |
|---|---|---|---|---|---|---|
| a. Depreciation expenses | 28.1 | 22 | 35.7 | 38.4 | 47 | 95.1 |
| b. Retained profit | 14.1 | 14.1 | 11.3 | 13.2 | 17.8 | 15 |
| c. Stocks | 3.6 | 2.9 | 7.8 | 9.6 | 17 | 6.2 |
| d. Corporate bonds | 5.3 | 5.1 | 10.2 | 7.9 | 17.7 | -6.5 |
| e. Bank borrowing | 35.3 | 41.7 | 20.4 | 15.2 | 3.3 | 1.9 |
| a+b. internal funds | 42.2 | 36.1 | 47 | 51.6 | 64.8 | 110.1 |
| a+b+c. net worth | 45.8 | 39 | 54.8 | 61.2 | 81.8 | 116.3 |
| (Fund operating) | | | | | | |
| a. Investment | 53.4 | 46.5 | 60.6 | 60.3 | 95.9 | 102.8 |
| b. Financial investment | 9.3 | 12.9 | 9.4 | 10.5 | 18.8 | 24.9 |
| c. Inventory investment | 13 | 20.7 | 1.1 | 5.8 | -2.1 | -4.8 |
| d. Cash and deposit | 7.5 | 9.5 | 4.8 | 5 | 17.4 | -19.6 |

Source: *Shuyo Kigyo Keiei Bunseki*, Bank of Japan, various issues.
Note: Allowance and accounts payable are excluded from fund operating.
Immaterial fixed assets and accounts receivable are excluded from fund operating.

**Table 6 The Share of Bank Lending by Size of Corporate Firms**




Source: Economic Planning Agency, *Economic Survey of Japan (1995-96)*, Japanese version, p.300.

Note: Larger firms have more than 1 billion yen capital, medium firms have more than 0.1 billion yen and less than 1 billion yen capital, smaller firms have less than 0.1 billion yen capital.

**Table 7. Ratio of Stocks Owned by Financial Institutions (%)**

| | 80 | 83 | 86 | 89 | 92 | 94 | 95 |
|---|---|---|---|---|---|---|---|
| Long-term Credit | 2.62 | 2.75 | 2.61 | 2.51 | 2.49 | 2.41 | 2.39 |
| City Banks | 8.09 | 7.95 | 7.38 | 7.29 | 7.52 | 7.49 | 7.38 |
| Trust Banks | 2.67 | 2.43 | 4.85 | 7.41 | 7.29 | 7.64 | 7.26 |
| Damage Insurance | 2.82 | 2.76 | 2.43 | 2.15 | 2.16 | 2.07 | 2.05 |
| Life Insurance | 11.45 | 11.68 | 10.61 | 10.47 | 10.62 | 10.03 | 9.41 |
| Total | 27.65 | 27.56 | 27.89 | 29.82 | 30.07 | 29.65 | 28.49 |

Source: *Kigyo Keiretsu Soran,* Toyo Keizai Shinposha, 1989, p. 61, 1997, p. 54.

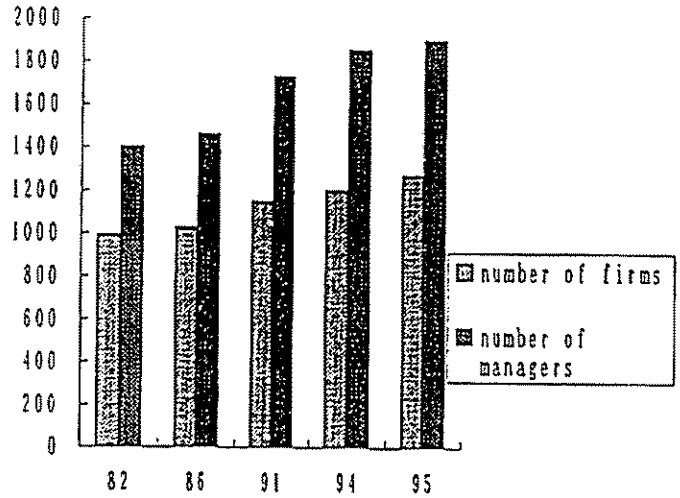
**Table 8. The Change of the Number of Firms Associated with the Main Bank in Terms of Owned Stock**

| | Long-term Credit Banks and City Banks (a) | Trust Banks (b) |
|---|---|---|
| 88 main firm number | -6 | 117 |
| sub firm number | 88 | 57 |
| Total | 82 | 174 |
| 89 main firm number | -29 | 108 |
| sub firm number | 116 | 169 |
| Total | 87 | 277 |
| 90 main firm number | 82 | 18 |
| sub firm number | 141 | 39 |
| Total | 223 | 57 |
| 91 main firm number | 29 | 15 |
| sub firm number | 92 | -15 |
| Total | 121 | 0 |
| 92 main firm number | 10 | -10 |
| sub firm number | 5 | 24 |
| Total | 15 | 14 |
| 93 main firm number | 51 | -28 |
| sub firm number | -33 | -23 |
| Total | 18 | -51 |
| 94 main firm number | 14 | -4 |
| sub firm number | 7 | 37 |
| Total | 21 | 33 |
| 95 main firm number | 45 | -20 |
| sub firm number | 8 | -70 |
| Total | 53 | -90 |

Note: main firms: main bank owns more than 3% of the firms and is the biggest stock owner among the banks. The firms are excluded from the object in case that the number of stocks owned is the same.
Sub firms: the main bank owns more than 3% of the firms and is the second biggest stock owner among banks. Corportes are excluded from the object in case that the number of stocks owned is the same.

Source: Kigyo Keiretsu Soran, *Toyo Keiza Shinposha*, various issues.

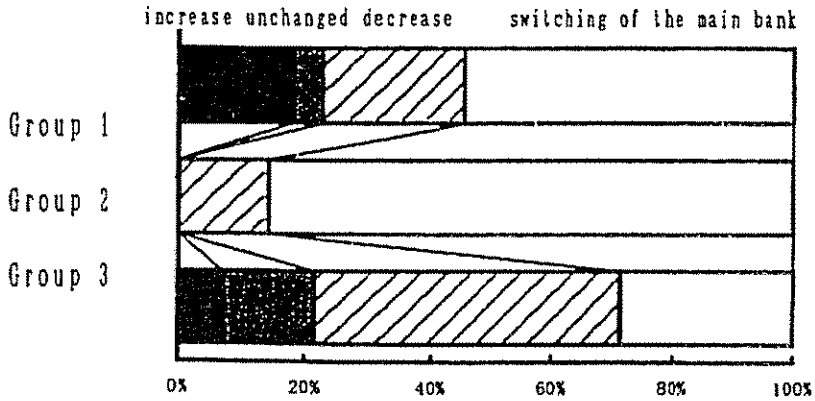
**Table 9** **Dispatching of Managers of Long-term Banks and City Banks (stock base)**




Source: *Kigyo Keiretsu Soran,* Toyo Keizai Shinposha, various issues.

**Table 10** **The Main Bank' Lending to Corporate Firms which Increased the Borrowing (1985-90)**

The Main Bank's Share

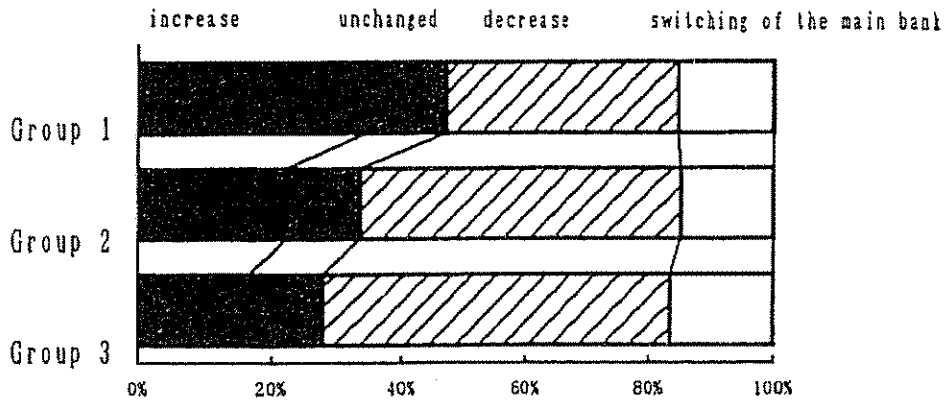



Note: 1. Source: *Kigyo Keiretsu Soran,* Toyo keizai shinposha.
2. The main bank means the first rank bank of lending.
3. Group 1: among 116 firms that are selected from ones listed on second Tokyo securities exchange, the borrowing outstanding increased by more than 2 billion yen.
4. Group 2: among group 1, the borrowing outstanding increased more than 5 billion yen.
5. Group 3: among 24 real estate firms listed on the securities exchange, the borrowing outstanding increased by more than 2 billion yen.

Source: Economic Planning Agency, *Economic survey of Japan (1995-96),* p.304.

**Table 11** **The Main Bank' Lending to Corporate Firms which were in Financially Distress (1985-90)**

The Main Bank's Share




Note: 1. Source: *Kigyo Keiretsu Soran,* Toyo keizai shinposha.
2. The main bank means the first rank bank of lending.
3. Group 1: among 116 firms that are selected from ones listed on second Tokyo securities exchange, the firms borrowed both in 1990 and in 1995.
4. Group 2: among group 1, the firms recorded deficit settlement accounts more than 2 times between 1990 and 1995.
5. Group 3: among group 1, the firms experienced less than the coveraged ratio more than 2 times between 1990 and 1995.

Source: Economic Planning Agency, *Economic Survey of Japan (1995-1996),* Japanese version, p.306.

**Table 12. Export and Import of Automobile & Automobile-parts in Japan**

| Year | Export of Automobile & Automobile-parts from Japan | | | | Export of Automobile & Automobile-parts to Japan | | |
|---|---|---|---|---|---|---|---|
| | Automobile | | Automobile-parts | Total | Automobile | | Automobile-parts |
| | Quantity (No.) | Value (US million $) | Value (US million $) | Value (US million $) | Quantity (No.) | Value (US million $) | Value (US million $) |
| 1980 | 6,119,055 | 23,273 | 2,015 | 25,289 | 48,365 | 485 | - |
| 1981 | 6,174,518 | 26,521 | 2,565 | 29,086 | 33,641 | 351 | - |
| 1982 | 5,784,333 | 24,559 | 2,564 | 27,123 | 36,179 | 378 | - |
| 1983 | 5,913,188 | 26,123 | 3,423 | 29,546 | 38,007 | 435 | - |
| 1984 | 6,429,009 | 29,821 | 4,513 | 34,334 | 44,885 | 500 | - |
| 1985 | 7,198,985 | 34,377 | 5,228 | 39,604 | 53,181 | 571 | - |
| 1986 | 7,011,588 | 42,676 | 8,253 | 50,929 | 74,383 | 1,125 | - |
| 1987 | 6,547,008 | 44,942 | 10,714 | 55,656 | 110,857 | 2,108 | - |
| 1988 | 6,364,371 | 48,787 | 9,131 | 57,918 | 155,586 | 3,165 | - |
| 1989 | 6,163,381 | 48,469 | 9,902 | 58,371 | 200,364 | 4,158 | - |
| 1990 | 6,164,717 | 50,959 | 10,850 | 61,810 | 257,191 | 6,394 | - |
| 1991 | 6,068,681 | 54,765 | 11,316 | 66,081 | 203,259 | 5,407 | - |
| 1992 | 5,995,007 | 60,490 | 12,522 | 73,012 | 191,012 | 5,162 | - |
| 1993 | 5,286,455 | 58,390 | 14,858 | 73,247 | 216,247 | 5,243 | 1,046 |
| 1994 | 4,727,173 | 56,914 | 17,558 | 74,472 | 314,203 | 7,238 | 1,136 |
| 1995 | 4,198,744 | 53,109 | 19,019 | 72,127 | 409,540 | 10,174 | 1,452 |
| 1996 | 4,224,650 | 50,609 | 16,918 | 67,527 | 458,756 | 10,602 | 1,627 |

Source: Ministry of Finance, *Japanese Trade Statistics*, Ministry of Finance, each year.

Note: Import of Automobile-parts to Japan is not collected until 1993.

**Table 13. Relative Strength Between MITI and JFTC (in terms of government budget).**

| | 1979 | 1982 | 1985 | 1988 | 1991 | 1994 | 1997 |
|---|---|---|---|---|---|---|---|
| N.A. | 2,007,200 | 2,328,645 | 2,553,034 | 2,780,770 | 3,229,681 | 3,679,579 | 4,017,982 |
| (JFTC) a | 2,313 | 2,658 | 2,881 | 3,247 | 4,080 | 5,241 | 5,559 |
| (MITI) b | 45,342 | 51,213 | 53,802 | 59,680 | 79,753 | 104,415 | 114,405 |
| N.C.D | 5,696,635 | 4,268,439 | 5,470,336 | 5,195,089 | 5,637,998 | 9,602,444 | 8,255,004 |
| (MITI) | 16,746 | 12,959 | 9,447 | 9,533 | 11,661 | 19,304 | 11,819 |
| I.D. | 3,537,077 | 4,105,877 | 3,595,336 | 3,948,540 | 4,113,824 | 3,028,751 | 3,143,198 |
| (MITI) c | 479,078 | 725,740 | 730,863 | 550,896 | 694,633 | 774,801 | 798,629 |
| Total | 38,600,143 | 49,680,837 | 52,499,643 | 56,699,714 | 70,347,419 | 73,081,669 | 77,390,004 |
| (JFTC) d | 2,313 | 2,658 | 2,881 | 3,247 | 4,080 | 5,241 | 5,559 |
| (MITI) e | 541,166 | 789,912 | 794,112 | 620,109 | 786,047 | 898,520 | 924,853 |
| e/d | 233.97 | 297.18 | 275.64 | 190.98 | 192.66 | 171.44 | 166.37 |
| (I.D.)/Total | 9.16% | 8.26% | 6.85% | 6.96% | 5.85% | 4.14% | 4.06% |
| c/total | 1.24% | 1.46% | 1.39% | 0.97% | 0.99% | 1.06% | 1.03% |
| b/a | 19.60 | 19.27 | 18.67 | 18.38 | 19.55 | 19.92 | 20.58 |

(value in millions of yen)

Source: Ministry of Finance; Ministry of Finance Statistic Monthly

*original budget
*N.A.: National Agencies
N.C.D.: National Land Conservation and Development
I.D.: Industrial Development

## Table 14. Change of Shares of Regulated Industries

| | A | | B | |
|---|---|---|---|---|
| Industries | 1965 | 1990 | 1965 | 1990 |
| Agriculture, Forestry & Fishery | 9.2 | 2.3 | 85.7 | 87.1 |
| Mining | 1.2 | 0.3 | 100 | 100 |
| Construction | 7.3 | 9.2 | 100 | 100 |
| Manufacturing | 31.9 | 25.9 | 23.4 | 14.1 |
| Wholesale & Retail Trade | 12.4 | 12.8 | N/A | N/A |
| Banking, Finance & Insurance | 4.7 | 4.9 | 100 | 100 |
| Real Estate | 6.2 | 9.4 | 2.6 | 7.5 |
| Transportation & Communications | 7.7 | 6.2 | 98.8 | 97.3 |
| Electric, Water & Gas Utilities | 2.5 | 2.4 | 100 | 100 |
| Services | 12.4 | 22.8 | 72.8 | 55.6 |
| Public Services | 3.2 | 3.2 | 0 | 0 |
| Others | 1.4 | 0.5 | 0 | 0 |
| Total | 100 | 100 | 47.8 | 41.8 |

* A) weight in whole industries (based on gross value added)

B) $\frac{\text{gross value added in regulated sector}}{\text{gross value added in the industry}}$

Source: Economic Planning Agency (1995).
*Economic Survey of Japan 1994-1995*,
Economic Planning Agency, Tokyo.
p.426 (Japanese version).

**Table 15. Relative Strength Between MITI and JFTC (in terms of the numbers of civil servants).**

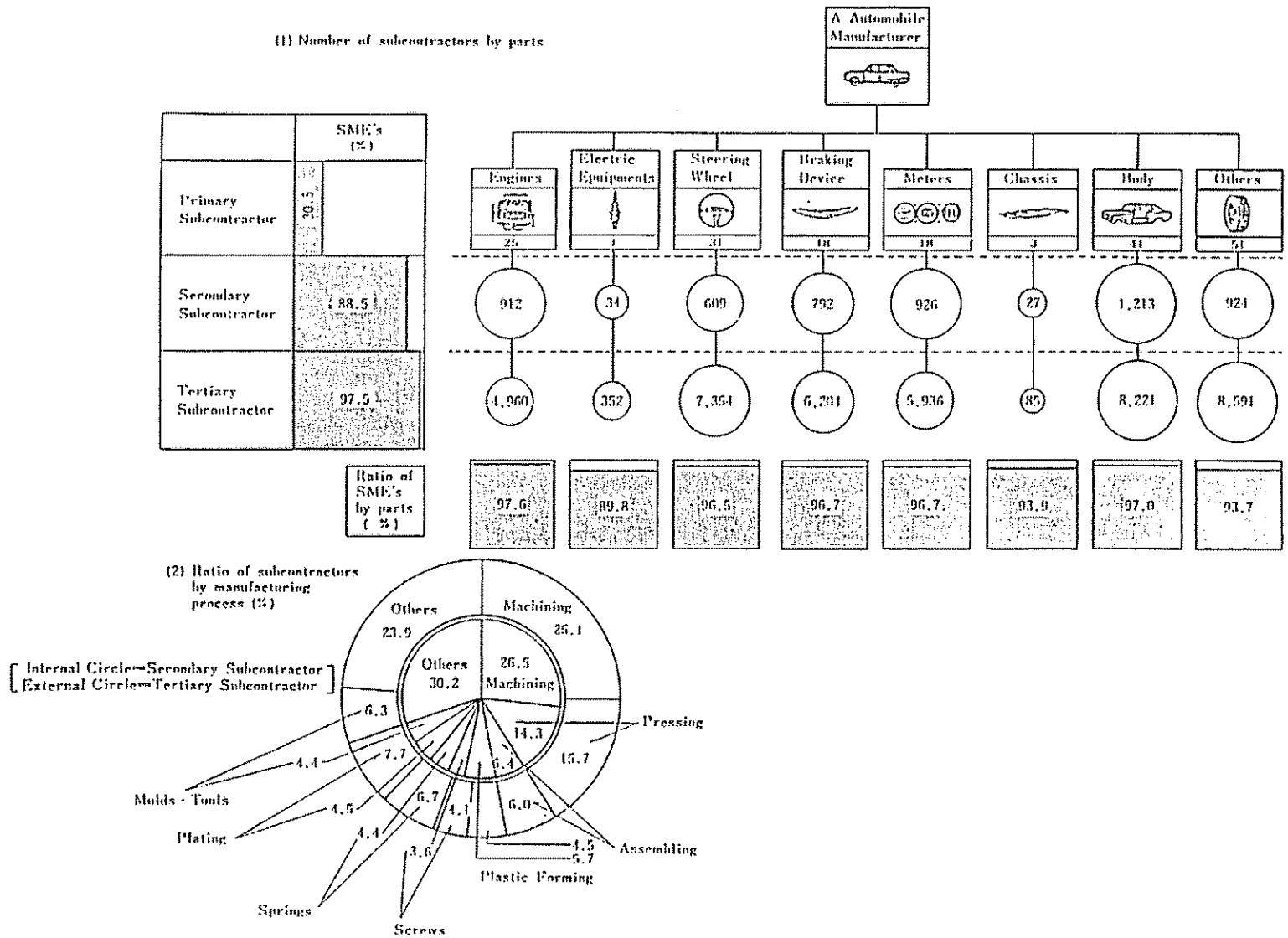
| | 1982 | 1985 | 1988 | 1991 | 1994 | 1996 |
|---|---|---|---|---|---|---|
| **Total** | 513893 | 507570 | 500058 | 497122 | 501494 | 502467 |
| **(MITI)** | 5553 | 5648 | 5530 | 5436 | 5489 | 5450 |
| **(JFTC)** | 420 | 425 | 435 | 460 | 486 | 513 |
| **MITI/Total** | 1.08% | 1.11% | 1.11% | 1.09% | 1.09% | 1.08% |
| **JFTC/Total** | 0.08% | 0.08% | 0.09% | 0.09% | 0.10% | 0.10% |
| **MITI/JFTC** | 13.22 | 13.29 | 12.71 | 11.82 | 11.29 | 10.62 |

*In 1982 and 1985, the figures in the above table are calculated on the basis of the number on 1 July. In 1988, 1991, 1994 and 1996, the figures on 31 March.

*The number of civil servants in MITI includes only main bureaus. (excluding external agencies (Agency of Industrial Science and Technology, Agency of Natural Resources and Energy, Patent Office and Small and Medium Enterprise Agency)).

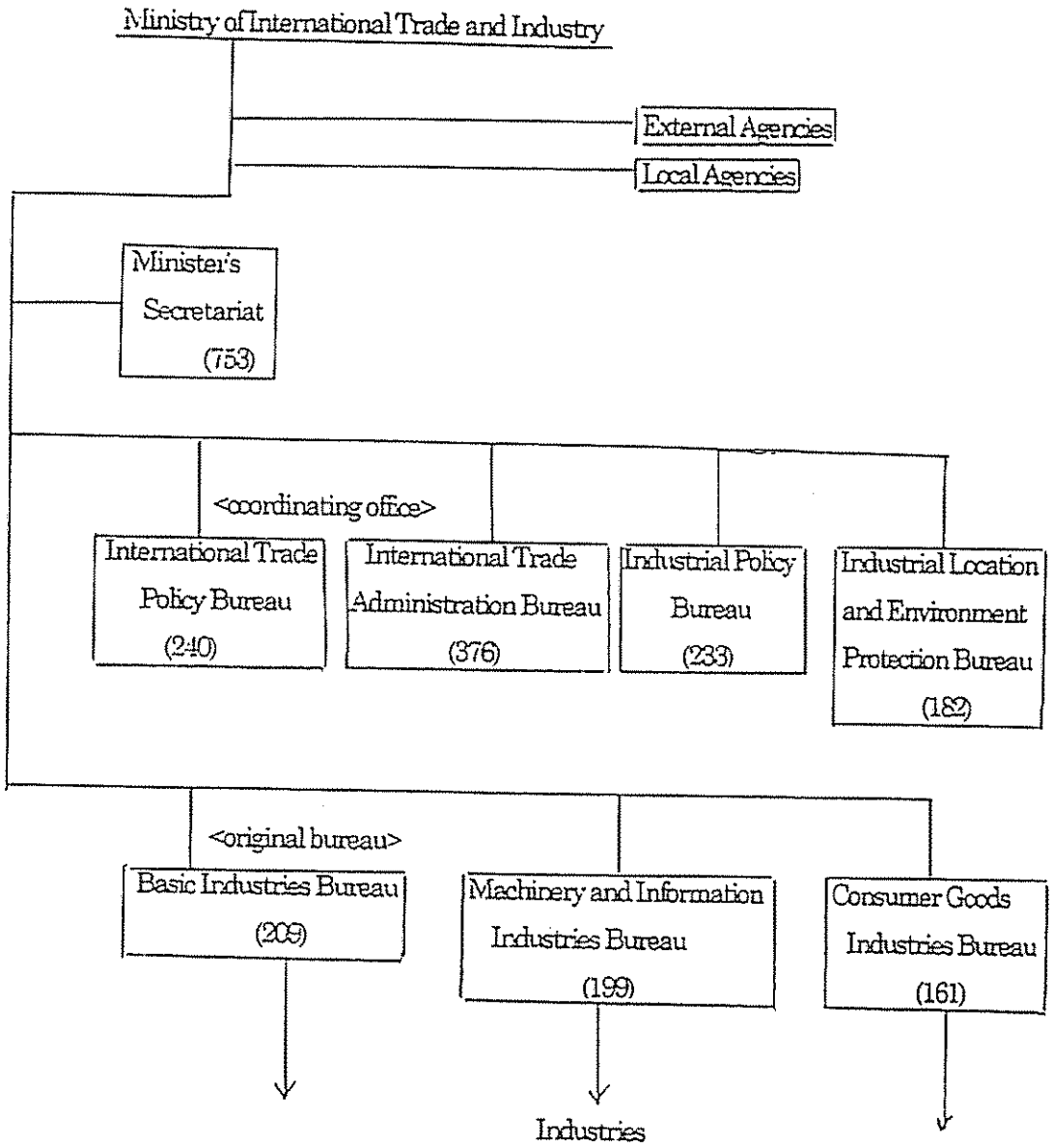
Source: National Personal Authority,
*Komuin-Hakusyo (Annual Report on Civil Servants),*
National Personnel Authority, Tokyo.

## Figure 1 Specialization in Automobile Industry




Source; Small & Medium Enterprise Agency, MITI., *White paper on Small and Medium Enterprise in Japan.*, 1978.

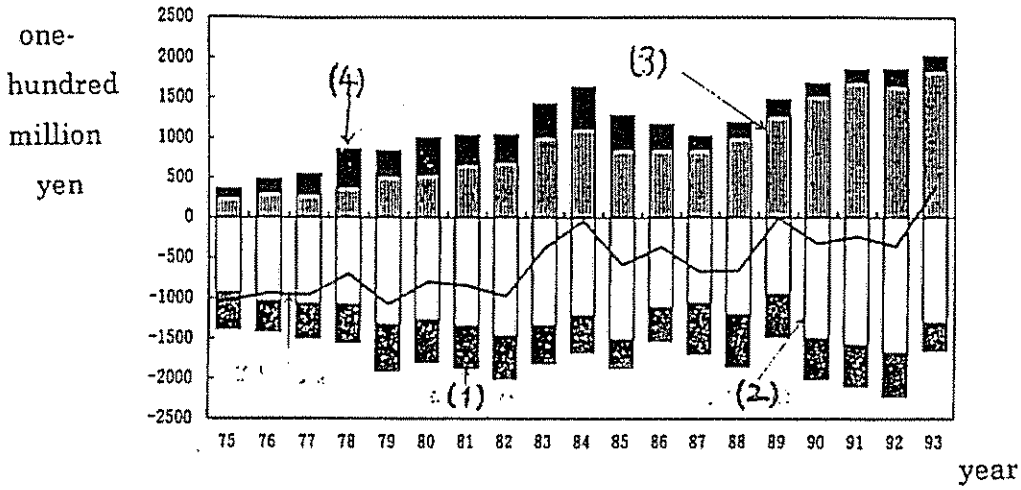
**Figure 2 Organization of MITI**




*These bureaus have the same organizational position.
*The figures in the parenthesis show the number of civil servants belonging to each bureau.

Source: Sangyo-Cyosa-kai (1997), Kankocho-Ziten (Encyclopedia of government and municipal offices).

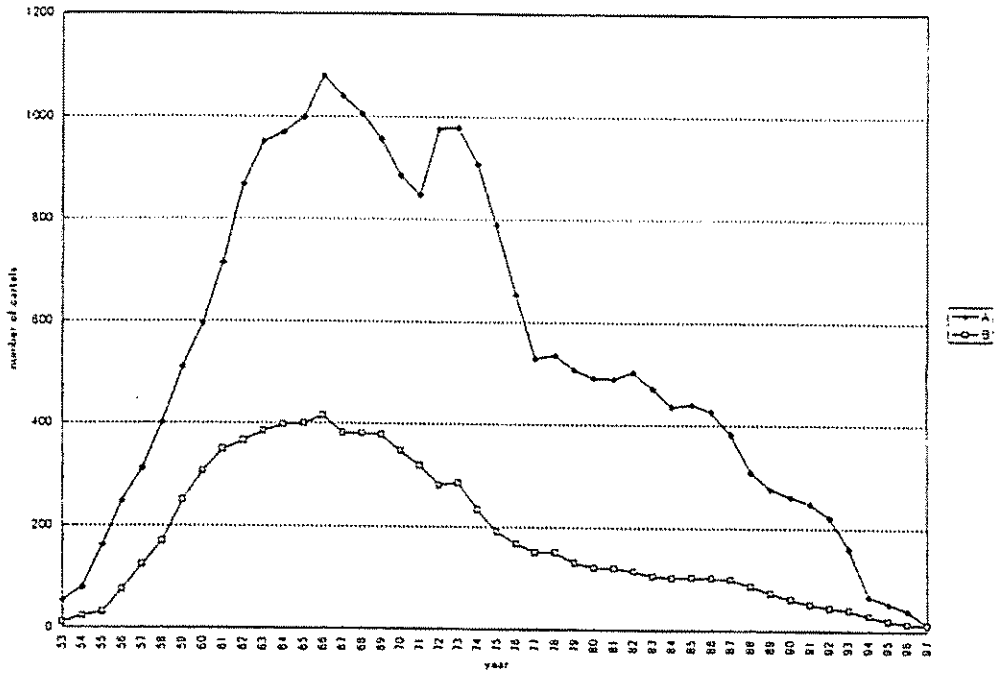
**Figure 3 Annual Surplus of Exports over Imports on Technology**




* Line graph indicates annual surplus.
* In the bar chart,
  (1) Europe, (2) North America, (3) Asia, (4) Others.

Source: Economic Planning Agency (1995), *Economic Survey of Japan 1994-1995*, Economic Planning Agency, Tokyo, p. 326 (Japanese version).

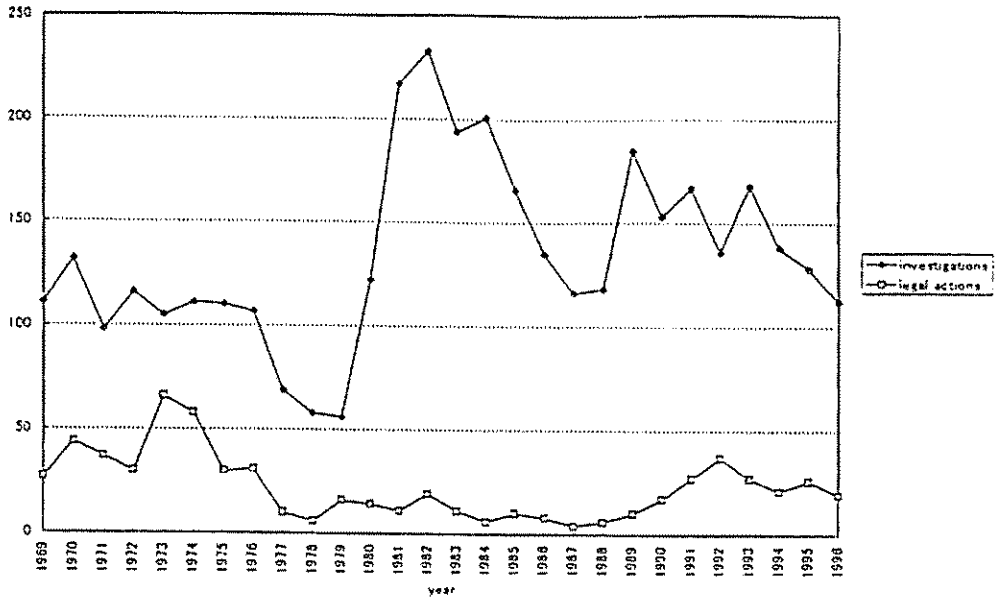
**Figure 4 Number of Cartels Permitted as Exemption from Antitrust Law**




*"A" shows total number of cartels.
"B" shows number of cartels when cartels in same industry are calculated as 1.

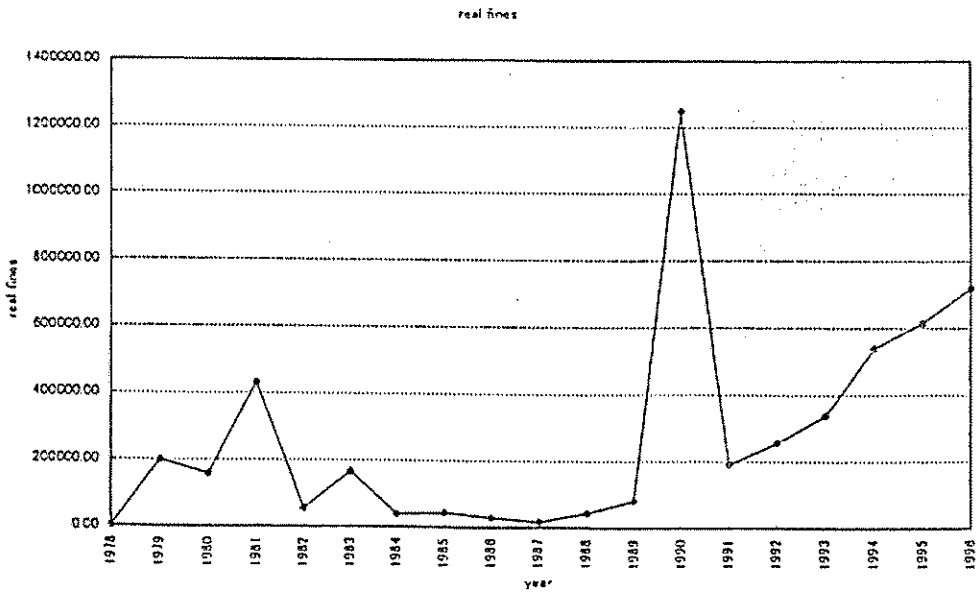
Source: Japanese Fair Trade Commission, *Annual Report.*

Figure 5 (a) Number of Investigations & Legal Actions by JFTC




*The above number is the one that are undertaken newly in the year.

(b) Real Fines Levied by JFTC




*Real fines (valued in million yen) are discounted by GDP deflator.

Source: JFTC, *Annual Report.* Economic Planning Agency, *Annual Report on National Accounts.*

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