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# The Structural and Behavioural Characteristics of Japanese Firms

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## Introduction

This paper discusses certain structural and behavioural characteristics of typical large Japanese firms, which, I believe, are considerably different from those of typecal large American or European firms. In the following first certain distinct features in the structure of Japanese firms are described (Sections 1 and 2). Then their behavioural characteristics are discussed, as resulting from their structural characteristics. The "structure" here refers to more or less persistent "anatomical" characteristics, similar to the "market structure" in the theory of industrial organization, and the "behaviour" refers to the decisions and patterns of actions of the firms in response to the changes in environment, similar to the "market behaviour or conduct". The analysis of the behavioural characteristics of Japanese firms is divided in two parts: a static theory dealing with stationary states (Section 3) and dynamic discussion explicitly taking into consideration the growth of the firms (Section 4). Finally, a few characteristics of Japanese firms which are not taken up in earlier sections but worth to be emphasized in my view are discussed in some detail (Section 5).

Alothough I confine the following discussion of Japanese firms to large firms, the importance of medium and small firms can hardly be overlooked in any discussion of "Japanese firms". According to the "Medium- and Small-Size Enterprises Act", medium- and small-size enterprises are defined as those with (i) 300 employees (for wholesale business, 100; for retail and service businesses, 50) or less, (ii) a capital of 100 million yen (wholesale business, 30 million yen; retail and service businesses, 10 million yen) or less. In terms of the number of employees, the proportion of medium- and small-size enterprises in all sectors of the Japanese economy has not shrunk in recent years but is on the rise.[1] The medium- and small-size firms have, by virtue of the afore-mentioned law and others, received certain favours from the government.

These favours notwithstanding, the basic strength of these smaller firms stems primarily from their own managenment strengths.

It is essential, therefore, to undrestand the structure and behaviour of smaller firms in order to understand Japanese firms and the Japanese economy. The present author's father-in-law is a small business proprietor, hence he is often driven to explain the various aspects of smaller firms, especially to foreigners. But the limited space of this paper does not allow such elaborations. The following discussions are limited to large firms.

This paper will touch on many problems in a wide scope related to Japanese firms and it is not possible to discuss each one of them in depth. Comments and any corrections on possible factual errors will be much welcomed.

## 1. Certain Structural Characteristics of Japanese Firms

When compared with their counterparts in Western Europe and North America, and also with those in China, Japanese large firms are marked by the following structural characteristics:

### (1) Legal Forms

Large firms in Japan are, by and large, joint-stock companies with stocks listed in the stock exchanges. The total number of listed companies is about 2,000. Although in number they represent less than 0.1% of all companies, in sales they account for about 40% of the total. Among them, about 1,100 are companies listed in the first section of the Tokyo and/or Osaka Stock Exchanges. They thus can be looked upon as the population of a typical, large Japanese firm. The scale of these 1,100 companies varies a great deal, from very recently privatized mammoth NTT (Japan Telephone and Telegragh Company) with 290,000 employees[2] to those with less than 100 employees (which hence fit into the definition of "the medium- and small-size enterprises.")

Among the large joint-stock companies that are not listed, some are sought after by college graduates as favourable places of employment. They include, for example, (i) companies owned by a family or families such as Idemitsu, Seibu Department Stores, Suntory, Takenaka Engineering, Yamazaki Works, and YKK; (ii) majority-owned subsidiaries of other listed companies or foreign enterprises such as Epson, Fuji-Xerox, IBM-Japan, Japan Oil Development, Mitsubishi Motor, and Yokokawa-Hewlett Packard; (iii) Companies in journalism such as largest newspapers, television and radio broadcasting companies, publishing houses, advertisement agencies; (iv) fast-growing new companies such as Shinkawa (semiconductor bonding machines), World, Japan Life (both apparel), Mori Buildings, Terumo (medical goods), consumer credit companies and so on.

The typical firm that represents Japanese "big business" is, however, one listed in the first section of the stock exchanges whose stocks are widely traded, as already stated. Large enterprises listed in (i) to (iv) above that are not listed companies are only a few in number, and cannot be considered as typical Japanese big businesses.

### (2) Separation of Ownership and Management

Stock ownership of the companies listed in the first section of the stock exchanges is widely dispersed except for the subsidiaries of large corporations, such as Hitachi Metals, Matsushita Electric Works, Yamatake-Honeywell, Fujitsu, Fanuc, etc. The top shareholder of the largest corporations holds usually less than 5% of the stocks; that of second-rank (in size) companies, less than 10%. Companies in which largest shareholders own more than 10% of the total shares are rare. The large shareholders are usually city banks, long-term credit banks, life insurance companies or trust banks, except for subsidiaries of other listed companies such as mentioned above. In addition, trading companies, other companies who are major clients, foreign institutional investor, employees' stock holding funds, owners and their family members, family-owned trading and/or real estate companies also appear in the large shareholders' lists from time to time. So do scholarship funds and educational and research foundations set up by the founders, their families or the corporations themselves. Some individuals have managed to remain in the top-ten shareholder lists of medium and small companies, but for large corporations such examples are rare.

The shareholding percentage of a bank in any joint-stock company is limited to 5% by the Anti-Monopoly Law amended in 1977 (10% before the amendment). At the time of the amendment, life insurance companies made a special appeal to revert the proposed 5% limitation back to 10% and won their case. Since then, they have called themselves the "silent partners" and tend to adopt a policy of not interfering with the management of the companies of which they are large shareholders.

The percentage of individual shreholding among the listed companies was 53.1% in 1955. By 1985 it dwindled to a meagre share of 25.2%. The reasons behind are several: (i) The decreasing number of owner-managers, due to heavy inheritance and income taxes and rapid growth of companies creating a demand for equity capital that the owner-managers alone could not meet; (ii) what is called the "shareholding stabilization policy" by the management, (iii) individual investors' preference for the safer deposits and loan trusts to shareholding; (iv) increasing parent-subsidiary relationships between companies and shareholding tied up with business relations.

Many large Japanese companies have the family name of the founder incorporated into the company name. In the beginning the founder and his relatives were active managers and large shareholders in the company bearing their family name, often serving as chairman or president. Today, the name remains, but family members or relatives have often disappeared altogether from the managing board and/or from the list of shareholders of these companies. Examples that come to my mind are C. Itoh, Furukawa Electric, Hazama-gumi, Iino Shipping, Ikegai Corp., Kawasaki Steel, Nishimatsu Construction, Nomura Securities, Nozaki, Tanabe Pharmaceuticals, and Yamanouchi Pharmaceuticals. The list will be much longer if we include those companies that were not named after their founders in the beginning. More then half of the companies listed today were established by individual "capitalists" who played the double role of large shareholders and the chief manager. The subsequent decline of their families has left these companies controlled by salaried managers, not by capitalists.[3]

In the separation between ownership and management of large firms, I believe, Japan is the most advanced among the industrialized countries including the United States.

(3) Employees

The core employees of a Japanese large firm are protected by the umbrella of the life-time employment and the seniority promotion systems. The definitions and actual practices of these two systems do not lend themselves to easy explanations. Briefly speaking, however, the life-time employment system is one whereby, first, companies employ graduates at the time they graduate from high schools, universities or graduate schools. From the point of view of the employee, this process is called *shūshoku*, or securing a vocation, a Japanese concept that does not have an exact English equivalent. Second, even when the company falls into dire straits or for whatever reasons, these employees will not be dismissed or laid off. Continued employment may mean being transferred to another, closely related company for a certain time (*shukkō*, on-loan service), usually with no loss in salary, other compensations or fringe benefits. Third, the employee, on the other hand, is free to resign after giving an appropriate notice. In fact, voluntary resignations and mid-career mobility have increased in recent years.

The seniority promotion system is one whereby a regular, full-time employee receives pay raises at definite intervals (usually 1–2 years), and is promoted to new posts (jobs, positions) regularly (every 2 to five years) on the basis of age and seniority.

A distinguishing characteristic of the Japanese seniority promotion system is that an employee's successive promotions are made in a spiral, rather than lineal, way. Namely, instead of lineal promotions from a position low in the chain of command to progressively higher posts above the earlier ones in the hierarchy, Japanese firms (and government agencies) generally promote an employee from a section of one department to a somewhat higher post in a section in some other department, or from a post in the home office to a somewhat higher post in a factory or a branch office unrelated to the former post.

Usually, the lifetime employment and seniority promotion system encompass only the employees known as <u>shain</u>, which literally means, "company members": again, no English equivalent exists. The "<u>shain</u>" employees comprise only "permanent" or long-term employees who "entered the firm" (<u>nyūsha</u> or "shūshoku") upon graduation from school, although a few hired later could also be included. Part-timers, temporary employees and "outside" workers (those dispatched by a subcontractor company which hires them) are not "company members". Before the war, white-collar "permanent" employees were classified into a number of strata, such as company members, quasi-members, hirees, apprentices, etc. Also, white-collars employees were clearly distinguished from blue-collar employees, as they are in Britain, the United States, most European countries or China today. "Company members" then constituted a small elite group of long-term employees.

With the rise of labour unionism after the war, much of the pre-war differentiation (or discrimination) among employees was abolished in the early 1950's. All long-term employees became "company members", and are now treated on a much more egalitarian basis than in the pre-war period. Of course, the salary and other treatments in the firm do vary substantially today depending on schooling, number of years of service, position, and whether the employee is white-collar or blue-collar, but the disparity within a firm is probably by far smaller in the case of large Japanese companies than anywhere else in the world.

This sort of egalitarianism, however, does not extend to temporary employees, part-timers, and "shokutaku" (non-regular staff members). Most of such employees are not members of the labour union, and they are not eligible for some of the fringe benefits, such as company housing. Government and other statistics on employment frequently count most of such non-regular employees among the firm's employees. But the figure of employees given by the firm, i.e., the employer, in its annual financial reports, for example, counts only "company members" (shain). It would thus be a mistake to conclude from government statistics that the mobility of Japanese labour is rising and that hence "the lifetime employment system is now breaking down".

Most female regular employees join the company upon finishing high school or junior college, although lately Japanese firms are employing more graduates of four-year colleges. They work as "company members" often just for two to four years and at most six to eight years, until marriage or the birth of their first child. Thus even "shain" women employees constitute a "transient" labour force of the firm: they fall into a grey area between the core, male, white-collar employees , covered by the aegis of lifetime employment and seniority promotion, and the part-time and temporary workers, who do not enjoy these protections.

Accurate estimates are difficult to come by, but I would say that approximately one-third of the total labour force may be under the lifetime employment and seniority promotion systems.[4]

(4) Managers

One of the most remarkable features of large Japanese firms is that a very high proportion of the top managenent (chairmen, presidents, vice-presidents, managing directors, directors) and the middle management (heads of divisions and departments, section managers, etc.) are selected from among employees who joined the company at graduation and have risen the ladder step by step through the process of seniority promotion.

Wage disparities among members of large corporations tend to be relatively small. In the typical large firm, the total annual income, inclusive of salaries and bonuses, of the lowest employee may be between one-tenth and one-fifteenth that of the highest-paid (that is, the company president) before taxes, and perhaps more than one-tenth after taxes. On an international comparison, Japan posts lower wage differentials between white-collar and blue-collar and between management and regular employees (excluding part-time labour) than any other Western developed countries, or than such countries as Singapore and Korea as far as I know.

In Japanese firms, the "management" thus emerges as the representatives of the employee group.

## (5) The Economic Rationale of the Lifetime Employment and Seniority Promotion Systems

Behind the Japanese seniority promotion system perhaps lies the Confucian notion that there should be "an order between the young and the elder", as well as the traditional Japanese view of the life cycle as a process of cultivating oneself and accumulating knowledge, skills and experience, eventually to become the head of the group, to be taken as a model by others. The historical and cultural background of the lifetime employment and seniority promotion practices of contemporary Japanese firms undoubtedly reflects the organizational principles of Japanese traditional organizations, from the extended farming family since old times, the merchant house of the medieval age, to the "han" (feudal domain) government of the Tokugawa era.

It must be noted, however, that the lifetime employment and seniority promotion systems became firmly rooted in the Japanese industry and business, covering both white- and blue-collar workers, only from as late as the mid-1950s, when the labour union activism of the early post-WWII years began to fade. It was not until the 1960s, in fact, that these practices spread to medium-sized firms.

What are the reasons why these practices spread from the late 1950s on to cover a major part of the Japanese labour force? The decisive factor was, I believe, simply that the lifetime employment and seniority promotion systems proved to be more economically rational and efficient than other models of corporate organization and employment practices given the social environment and cultural traditions of contemporary Japan.

With these systems, the typical Japanese firm constitutes an elaborately built organization in which what I call "managerial resources" are abundantly accumulated. The "managerial resources" refer to know-how and capabilities in a particular industry, regarding engineereing technologies, organization of production, quality control, marketing, research and development, and information gathering and analysis, as well as general administrative and organizational capabilities and ability to procure efficiently raw materials, other resources and capital funds. Like good universities or research institutes, such organizations are really conglomerate assemblies of human capital. They cannot be built in short time. Enduring attention to training and skill development for each member of the firm, moreover, is necessary to maintain and extend capabilities of individual employees of which the firm is composed. On-the-job training is particularly important. Lifetime employment and seniority promotion practices produce excellent results for both the firm and its employees given these goals. High inter-firm labour mobility, over-emphasis on specialized abilities and immediate results at the expense of the seniority principle, or personnel policies that do not involve regular raise, promotions and job rotation would lead to lower efficiency at least in the contemporary Japanese environment.

(6) Labour Unions

It is perhaps well known that most Japanese labour unions are organized on a company-by-company basis. All regular employees of a firm, whether blue- or white-collar, are enrolled in the union upon entering the company, and the union does not have any members working in other firms.[5] Typical Japanese unions are "company-based unions" on the "union shop" model. However, as noted above, part-timers and other non-regular employees are not usually included, and it goes without saying that managers above a certain level and employees in sections responsible for employment and personnel affairs do not belong to the union.

As a result, there are far more labour unions in Japan than in other major industrialized countries (See Table 1). As Table 1 also indicates, the unionization rate in Japan is relatively low, as in the United States. This is particularly true of employees of medium- and small-sized enterprises. Widespread union organization covers only large corporations and the public sector; the majority of workers in smaller firms are not unionized.

Why in Japan did company-based unions develop, a model of union organization not found in other industrialized countries? The answer is simple: employees who work long years together in a firm under the lifetime employment and seniority promotion systems tend to hold their interests in common. Their identification with the employees of other firms tends to be much weaker. Thus the labour union based in a firm and the firm's management naturally develop common interest over a broad range of areas. Over the long term, then, and considered rationally, the management and the union have few conflicts of interests when the firm exhibits steady growth. This point will be further discussed below.

## 2. The Structure of Ownership and the Control of Big Business as a Whole

The largest shareholders in Japanese firms are banks (including long-term credit banks and trust banks), insurance companies, trading companies, and affiliated companies. Similarly, the largest shareholders in the last two are banks and insurance companies. Stocks of a bank are held by other banks, insurance companies, and the bank's leading customers. Who, then, really own these large companies?

### Who Own the Large Firm?

When one nets out these interlocking shareholdings, insurance companies emerge as the leading holders of large companies' stocks. Disregarding some insurance companies established by foreign companies or with foreign participation, which were all recently established and relatively small, only four of the twenty insurance companies in Japan are stock companies. These four insurance companies are relatively small. The other sixteen, including the very large Nippon, the Dai-ichi (First), Sumitomo, and Asahi, are all mutual companies, which legally are owned by their "shain" or "company members". In the case of the life insurance mutual company, the term "company members" has a special usage, and signifies those who subscribe to life insurance plans offered by the company. To put things in order, then, after all the interlocking shareholdings are cancelled out, and assuming that those left are the true owners, we find that the core of big business in Japan, is owned, at least legally, by perhaps more than thirty, forty, or perhaps more than fifty million subscribers to private life insurance plans.

In view of these facts, it is obvious that the old proposition of Marxian economics that "the basis class opposition in the capitalist society is the opposition between the working class and the capitalist class" does not hold in a "capitalist" society like Japan today.

### "Capitalist Is the Common Foe of Labour and Management"

An interesting example of an unsuccessful buy-out takeover took place early in 1981, when the Daiei, Inc. attempted to acquire a substantial amount of stocks of Takashimaya Co., Ltd. Daiei (capitalized in 1981 at about 8 billion yen) is a relatively new supermarket giant, operating a chain of large supermarkets. Daiei's founder and president, Mr. Tsutomu Nakauchi, is a vigourous and versatile entrepreneur, a real capitalist in name and in fact. With a 20% interst, he was Daiei's largest shareholders. By contrast, Takashimaya is one of Japan's oldest and most prestigious department store chains. With members of the Iida family as chairman, president, vice-president, and managers in other important positions, Takashimaya was known for its strong family flavour. In 1981, however, no member of the Iida family was among the company's top twenty shareholders (the 20th held 0.66%) and the entire family together held no more than a 1% share in the company. Daiei bought a large amount of Takashimaya stocks from Jūzenkai, a medical foundation notorious for its stock-cornering activities, and at one time held 10.5% of Takashimaya's shares. Fearing that Daiei might exercise its right as a major shareholder (more than 10%) to review the department stores' account books, which would reveal to Daiei, a competitor, information about Takashimaya's procurement routes, the prices it paid for goods, and other secret information, Takashimaya's management fought back. In the end, Daiei was not able to gain access to the account books or to put its managers on the Takashimaya board. At the present time, Daiei remains only as the second largest shareholder (5.7%).

Daiei's intrusion failed because Takashimaya's management, employees, and banks pulled together to fend off the invader. Professor Tadanori Nishiyama has noted in this connection that "the Japanese management is extremely averse to capitalism — the capitalists are, so to speak, the common foe of the labour and the management".[6] This amusing observation, if somewhat overly sensational, seems not too far off the mark.

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## What Does It Mean to "Own" and to "Control"?

Throughout the first two sections I have used terms like "own" and "control" without clearly defining them. In part, this is because their meanings are hard to pin down. In certain cases, such as a child "owning" a bicycle, or an urban resident "owning" consumers' durables or a house in which he (or she) lives, or a farmer "owning" the land he tills, the sense of the term is relatively clear. But in a society such as Japan, the ownership of certain types of assets (especially once their values exceed a certain magnitude), shares of corporations, and possession of famous historical or cultural objects, etc., are all subject to a variety of complicated legal, social, and cultural restrictions, including taxes.

An organization as complex as a large contemporary firm involves complex mechanisms for distributing the surplus it generates. Irrespective of legal definitions of rights and responsibilities, ownership of the firm, in an economic sense, is not easily defined. "Ownership" is not a black-and-white affair, but a "grey" matter of varying degrees: who get how much share in the firm's profits, who are responsible for the losses, and who participate to what extent in its managerial decision-making process.

"Control" or "manage" (Japanese, shihai) is even more difficult. The Japanese word "shihai" expresses a number of nuances and depending on usage can be rendered into English as control, manage, govern, direct, rule, dominate, sway, etc. Unless one's purpose is propaganda, it may be best to avoid using the term at all in social-science discourses unless its usage is clearly defined at the outset.

## 3. An Hypothesis on the Behavioural Principles of Japanese Firms: A Static Theory

Standard microeconomic theory of the firm assumes that in a private market economy firms act in such a way as to maximize profits. Numerous scholars have challenged this "profit-maximization" hypothesis and proposed alternative explanations of corporate behaviour.

What is the value of these alternative hypotheses of corporate behaviour? They contain much that is worth noting and are convincing to a certain extent and/or in some respects. However, their clarity and fit with observed experience are not as much as to lend them sufficient weight to replace the neo-classical profit maximization theory or its dynamic version, "maximization of corporate net worth" (total stock value).

For quite some time, though, I have felt that the simple theory of profit maximization does not offer a compelling explanation of the behaviour of large Japanese firms, and that the theory, I believe, stands in need of revision, especially in the following areas.

## The Notion of "Our Company"

As mentioned above, managers in Japanese firms tend to act as representatives of the employee group (that is, of the regular "company members") rather than as dedicated agents of the shareholders serving for their interests. As a result, shareholders have little say in the operation of the firm.

The core of a typical large Japanese firm consists of the group of its "company members". When reporting to shareholders at annual meetings, the managers of American firms frequently use such phrases as "Your company has...", whereas Japanese managers speak of "Our company has..." instead. Moreover, even non-managerial empolyees regularly use "our company" or "we (the company) do such and such" in everyday conversation: e.g., "We had good results this quarter" or "We aim at to be No.1 in this area within five years". Such a difference in terminology amply demonstrates the fact that, more than anything else, large Japanese corporations exist for the benefit of their employees.

It appears to me that the employees (shain) of large Japanese firms have a share in the profits of the firm, broadly defined, through the salaries and bonuses which differ from those of other firms according to the results achieved by the firm. The part of profits accruing to the employees takes many forms such company housing, hospitals, other welfare facilities, and lump-sum retirement allowances and annuities after retirement. All of these depend very much on the performance of the company. Thus, I believe that Japanese firms, whether they are legally joint-stock companies or mutual companies (as with insurance companies), all have characteristics closely resembling what is called the "labour-managed firm" in economic theory, or in the economics of comparative economic systems.

Of course, the typical large Japanese firm is organized as a joint-stock company, and a portion of the profit, whether broadly or narrowly defined, is indeed distributed to the shareholders. Any argument or theoretical model that disregards this fact is not appropriate when discussing typical large Japanese firms.

## A Simple Static Model

In order to approach a theory discribing the behavioural principles of the typical large Japanese firm, as a first approximation a simple static model now is presented. It is assumed that the management distributes a certain proportion of the profit to the shareholders and the rest of the profit (plus, of course, wages and salaries) to the "company members". It is assumed that the levels of output and capital and labour inputs are set in such a way as to maximize the per capita income of the "company members".

The model may be formulated in a very simple way as follows. A firm's production function is expressed as

$$X = F(L,K)$$

X represents the firm's level of output. L and K represent, respectively, the amounts of labour and capital inputs. The function F must be considered as different from firm to firm and is not linear-homogeneous. Otherwise the model will lose its validity as a theory applicable to large Japanese firms (and most likely to the firms in other countries as well). Next, let p represent the price of the product, w the wage rate as determined on the labour market, and r the rental price of capital (the interest rate or the rate of return on stocks), again as determined by the capital market. Any profits available after all the costs are subtracted will be shared between workers (employees) and capitalists (shareholders) in the ratio $\beta : (1 - \beta)$. Therefore, if W stands for the total income received by the firm's workers and R the total income accruing to the firm's investors, we arrive at the following equations:

$$\left.\begin{aligned} W &= (pX - wL - rK) + wL \\ R &= (1 - \beta)(pX - wL - rK) + rK \end{aligned}\right\} \qquad (1)$$

Thus, the hypothesis here about the behaviour of large Japanese firms is: the firm acts in such a way as to maximize the per capita income of workers, under the profit-sharing scheme in which the firm's profits in excess of costs (including wages) are distributed in a fixed proportion between employees and shareholders.

The income of an individual worker can be expressed, then, as

$$i = \frac{\beta (pX - rK)}{L} + w(1 - \beta)$$

If F possesses the differentiability and second-order properties usually assumed in this sort of excercise, then the firm will determine the level of labour input (employment) so as to satisfy the equation

$$\frac{\partial i}{\partial L} = \beta \frac{pF_L \cdot L - (pX - rK)}{L^2} = 0$$

where $F_L$ and $F_k$ are the first partial derivatives of the production function F, and represent, respectively, the marginal (physical) productivity of labour and capital. As a result, the firm will employ an amount of labour to make its marginal (value) productivity equal to its average net productivity, i.e.,

$$pF_L = \frac{pX - rK}{L} \qquad (2)$$

By "net" is meant an amount after the costs of capital and all other factors of production have been deducted. Thils behavioural pattern resembles that deduced from the theory of labour-managed firms.

On the other hand, the amount of capital used will be determined to fulfill the following equation:

$$\frac{\partial i}{\partial K} = \beta \frac{1}{L} (pF_K - r) = 0$$

or,

$$pF_K = r \qquad (3)$$

The amount of capital used, in other words, will be such as to make the marginal productivity of capital equal to the cost of capital at which capital funds are procured from the capital market. This is nothing other than the ordinary optimization condition pertaining to the various inputs.

Now, if the firm is dominated by a capitalist rather than by its workers who maximizes the return on capital, then the maximization conditions will be different from those given in equations (2) and (3), in a symmetrical way:

$$pF_L = w \qquad (4)$$

$$pF_L = (pX - wL)/K \qquad (5)$$

In both equations (2) and (4), it should be noted, the per capita income each worker recieves from the firm is equal to the marginal productivity of his labour.

The above argument must be revised somewhat if the firm is a monopolist whose product price is not fixed. In place of price p in the right-hand side of equations (2) and (3) marginal revenue $p(1 - 1/e)$, must be inserted where e is the price elasticity of demand for the firm's product. In all other aspects the argument would stand as in the above.

A Graphical Representation of the Theory of the Labour-Managed Firm

The pattern of behaviour described by the simple static model of the labour-managed firm may easily be understood through a graphical representation in Figure 1.

The horizontal axis in Figure 1 marks the amount of labour input, i.e., the number of workers constituting the labour-managed firm. Curve AA represents the average productivity of labour when the inputs of other productive factors are given. Curve MM represents the marginal productivity of labour under the same conditions. To workers already employed by the firm, the most advantageous number of workers is $L_1$, which corresponds to Q, the point at which lines AA and MM intersect. This is because the per capita income (which is equivalent to the average (net) productivity of labour) earned by each worker reaches a maximum at that point. Any reduction or increase in the number of workers will result in a loss in the per capita income and prove less advantageous to the workers.

Equation (2) above can easily be understood by applying the same principle.

A firm that maximizes the return to the owners of capital would, under the same constraints, employ an amount of labour, $L_2$, corresponding to R, the point at which the wage rate, w, prevailing in the outside labour market equals the marginal productivity of labour. This is the situation described by equation (4).

If, moreover, the labour-managed firm is able to hire non-member workers at the market wage rate w, who can be as productive as members in certain kinds of job but can be excluded from sharing the profits of the firm, it will be advantageous for the member workers to employ them in the amount represented by the segment $L_1L_2$. By so doing, the total income available for distribution to member workers will be increased by the amount in the shaded area QRS.[7] In other words, member workers "exploit" non-member workers. This would explain the behaviour of Japanese firms when they hire temporary workers, part-timers, and others who are not treated as "company members".[8]

## What Does the Static Theory Tell Us?

I believe that the static theory outlined in equations (1) - (3) is very simple, yet highly relevant as a first approximation of the behaviour of typical large Japanese firms. It seems particularly useful in explaining the following three widespread phenomena or tendencies.

(1) Inter-firm wage differentials

The wage differentials between large, medium-to-small, and very small firms in Japan are quite large, compared with those in other developed countries. Significant differences in wages and salaries also occur among large firms listed in the First Section of the stock exchange. By wage differentials is meant differences or disparities among firms in the total benefits awarded workers, including not only wages, salaries, and bonuses but also all kinds of fringe benefits. The nature of these wage differentials is readily understood when we visualize each firm as possessing different technologies, a different accumulation of managerial resources and hence a different production function, and workers of a firm as having a share in the firm's profits, as described by the simple static theory just presented. Such managerial resources cannot be represented by the amounts of labour and capital, or of other factors of production.[9]

In the past, the wage differentials in Japan between large firms and the medium-to-small firms (of which the wage disparity is most obvious) and the economic structure that was regarded as the cause of the wage differencials were called the "dualistic structure" of the Japanese economy. Once we realize that large Japanese firms resemble labour-managed firms, however, we can see that wage differentials will occur normally and permanently between firms even when each firm acts rationally and each workers receive an income equal to his marginal productivity.

## (2) Large Japanese Firms Are Kept "Slim"

A comparison of large Japanese firms and their American counterparts reveals that the Japanese firms have far fewer employees in relation to sales. Table 2 gives some examples. Toyota's annual sales amount to some one-third those of General Motors, but it employs less than one-twelfth the number of workers of GM, and similarly for Hitachi vs. General Electric.

As these examples illustrate, the large Japanese firm is kept "slim", that is its main body (the parent company) hires a relatively small number of employees. Particularly since the first oil crisis in 1973-1974, firms have pursued what is called "weight-reducing" strategies. One of the primary reasons for their making active use of subsidiaries, affiliated companies, subcontracting, temporary workers, and part-timers is the realization that it is more rational to share the common profit under the umbrella of a firm among as few workers as possible, both in terms of work-incentives and from the standpoint of equity of income distribution.

## (3) Strict Selection of Employees

Japanese firms in general are quite cautious about selecting applicants when hiring them as "company members". The large expenditures for the rigourous screening of applicnts, the various types of internal schooling and on-the -job training after employment may follow naturally from lifetime employment, but they make even more sense when we realize that Japanese firms have aspects of labour-managed firms.

In Japanese firms (and faculties of universities as well), the existing employees (or professors) seek to hire only those people whose abilities would match or surpass their own and who they feel will be capable of contributing even more to the company (faculty) than they themselves do. They are also quite enthusiastic about educating and training new and junior "company members". The reason for their concern is that if the newcomers perform (or can perform) at a level that is worth only the common wage rate prevailing in the external labour market, then the existing employees, too, will suffer a loss of income. In firms that behave in the manner described by the standard theory of firms, this sort of issue would not arise, since the employees are assumed to receive wages and other benefits equal to the rate prevailing in the market for each job classification, and contribute to the firm in accordance with the remuneration they receive.

## Differences from the Labour-Managed Firm

The formal structure of the labour-managed firm is similar to that found in Japan's agricultural, fishery, and consumers' cooperatives, credit unions, credit associations, and other mutual and cooperative organizations. These organizations are basically egalitarian in structure; at least in theory all members share equally in rights and responsibilities. Typical Japanese firms, by contrast, are not egalitarian, but hierarchical, organizations. Posts, rights, power and rewards are apportioned to each employee hierarchically on the basis of his schooling, the length of service within the firm, abilities, contribution to the firm, etc.

This combination of hierarchical organization and a graduated distribution of income cannot be explained by the simple theory of the labour-managed firm outlined above, nor, it seems, by most other theories.

Moreover, according to the theory presented above, a portion of the profits left after expenses is distributed to the workers while the remainder goes to the owners of the capital, but why does the distribution take this form? And what factors determine the distribution ratio between workers and capitalists? The static theory presented here does not provide answers to these questions.

## 4. Growth of the Firm and Income Distribution: Dynamic Considerations on the Behaviour of Firms

### The Demand for Continuity of the Firm

As mentioned in Section 1, Japanese firms are conceived of as an elaborately organized body consisting of managers, engineers, skilled workers, clerical and sales staff who together represent an accumulation of managerial resources in a certain area of business. Year after year this organization has to hire new "company members" under the system of lifetime employment and trains them within it in order to develop human resources. Hence, the continued existence of the firm is vital. An emphasis on continuity of the firm is one of the most remarkable features of the behaviour of Japanese firms, which derives from the constraints imposed by the lifetime employment and seniority systems. In Japan, firms that have become larger than a certain size are rarely liquidated, go bankrupt, or are absorbed by other firms. Or at least they do so at a much lower rate than firms in other developed countries.

Should a large corporation in Japan fall into financial difficulties and go bankrupt or be absorbed by another firm, the firm's "company members" face severely straitened circumstances. Their situation is rather like that of the "masterless samurai" (rōnin) of the Tokugawa-era, who had to wander about the country because their "han" (daimyo) had ceased to exist by some misbehaviour on the part of the daimyo family head. When the possibility of such a decline is foreseen, the firm will not be able to bring in promising new employees, and moreover, capable existing employees will move off to other firms. The firm may also have trouble procuring capital. The task confronting managers, then, is to maintain performance at least at a level that removes all doubts about the firm's continued viability.

### Internal Pressure for Growth of the Firm

The firm, however, cannot continue to exist merely by repeating the same operations year in and year out. Almost all products possess a life cycle. Older products eventually face falling demand as they saturate the market or are replaced by newer products. Even when there is steadily growing demand for the firm's products strong domestic or foreign competitors may drive out the firm. Therefore, the firm must incessantly try to develop new products and open new markets, even just for its survival.

Hence, even if the firm's goal is simply to maintain its current size in terms of sales or number of employees, it cannot afford to pay out all the profits that remain each year after expenses are deducted to its shareholders and employees.[10] In order to remain at the same level of productive activity the firm must invest a portion of its profits (broadly defined) in research and development, in the commercialization of new products, in opening up promissing new markets, and in investment in plant and equipment.

Japanese firms, moreover, face intense internal pressure for growth. Fist of all "company members" want the income they receive from the firm to grow steadily every year at a rate commensurate with or possibly higher than that of other large firms. Moreover, faster growth of the firm also benefits "company members" in several other ways:

(a) Under the Japanese seniority promotion system, faster growth of the firms leads to surer opportunities for faster promotion in posts, and hence faster raises in salaries;

(b) Long-term employees, whether white- or blue-collar, when they reach the retirement age of 55 or 60, will find their chances of advantageous reemployment considerably improved if the firm is expanding steadily; and

(c) An employee of a rapidly growing firm will have many employees in the same firm younger than himself, which means the strengthening of the financing of firm's pension scheme and the like.

For these reasons, large Japanese firms which possess the structural characteristics outlined in Section 1, also exhibit a strong disposition toward continuity and strong internal pressure for growth of the firm, as their behavioural characteristics.

## Theory of Maximization of the Firm's Present Value

The standard microeconomic theory of the firm states that over the longer run, the management of firm will act to maximize the firm's present value. According to this theory the firm has to spend "growth expenses", including research and development, market development and other expenditures in order to realize the growth of profit through broadening the scale of its business activities. It is assumed that a relationship exists between theses "growth expenses" and the rate of growth of the firm's sales. The owners (shareholders) and their agent, the management, deduct these growth expenses from the firm's gross profit to arrive at the firm's net profit (net income). The present value of the firm is computed by discounting the flow of net incomes at an appropriate rate and then summing them up. It is equal to the total value of its stock at the current market price. It is this value, according to the theory, which the owners and managers seek to maximize.

This theory can be expressed in the following equations. First, let $R(t)$ represent the firm's gross profit for period t. The firm will spend a fixed portion of the gross profit as "growth expenses" $M(t)$. Therefore,

$$M(t) = mR(t)$$

in which m is a constant. The rate of growth of the firm's profit, g, depends on m.

$$g = g(m)$$

The flow of net incomes of the firm can be expressed as

$$(1 - m)R(0),\ (1 - m)R(1), \ldots, (1 - m)R(t), \ldots$$

Discounted at rate $\rho$, the net flow on incomes is expressed as

$$(1 - m)R(0),\ (1 - m)R(0)(1 + g)/(1 + \rho),\ \ldots,\ (1 - m)R(0)(1 + g)^t/(1 + \rho)^t,\ \ldots$$

The present value of the firm V is equal to the sum of these terms. In other words,

$$V = R(0)(1 - m)\Sigma_{t=0}^{\infty} \frac{(1 + g)^t}{(1 + \rho)^t}$$

Assuming that the series is convergent,

$$V = R(0)(1 - m)\ (1 + \rho)/[\rho - g(m)] \qquad (6)$$

The firm will set m so as to maximize its value, V. V will reach a maximum when

$$\frac{\partial V}{\partial m} = R(0)(1 + \rho)\frac{-[\rho - g(m)] + (1 - m)g'(m)}{[\rho - g(m)]^2} = 0$$

In short, m is set to satisfy

$$(1 - m)g'(m) = \rho - g(m) \qquad (7)$$

Thus the firm's management, as the representative of the shareholders, will set m, the proportion of the gross profit spent for growth expenses, at a level that will satisfy equation (7). This theory is based on internal financing, which assumes that all the funds necessary to meet investment and research and development expenses will be derived from the firm's gross profit. Although it makes no provision for the possibility of raising funds through external financing such as new stock issues or borrowing, its conclusions are not affected significantly by the introduciton of the possibility of external financing.

### Revisions Necessitated by Our Hypothesis about Japanese Firm's Behaviour

The traditional theory just outlined needs to be revised according to the hypothesis about Japanese firm's behaviour presented in Section 3. It was assumed there as a first approximation in equation (1) above that the firm's managers distribute a portion of the profit to the shareholders and the remainder to the employees. Under this condition, the firm's management, as the representative of its employees, will set its growth rate so as to maximize the present value of the net flow of incomes (including a portion of the profit) for each of its present employees.

But employees, unlike capital, are not immortal. If an employee knows how many more years he (or she) can work for the firm, and he has good expectations of being able to work for the full term, then a growth policy that maximizes the total value of his earnings during that peirod, after allowing for an appropriate discount rate, will prove most advantageous to him.

As noted above, the employee group, including managers, is not a homogeneous body. Wages and salaries, fringe benefits, and the right to participate in the firm's decision-making are arranged hierarchically. Individual interests vary considerably depending on the age, position and expected length of employment. The length of employment, for example is generally very short in the case of female employees, as noted earlier. The most beneficial discount rate also varies widely from one individual to another.

We should also remember that employees enjoy the additional benefits (a), (b) and (c) noted above from the growth of the firm.

## "The Distribution Revolution": Present State and Background

In Section 3 it was assumed that the firm's profit would be distributed between its employees and shareholders at a given ratio $\beta :(1 - \beta)$. It is, however, an *ad hoc* simplification to assume that this distribution ratio is arbitrarily fixed. Rather, this ratio would vary dependig on the economic conditions surrounding the individual firm its employees, and the shareholders.

The first area of inquiry for the empirical research on Japanese firms would be to investigate the magnitude of their profits and to analyze how they are distributed. In a broad sense relevant to the theory presented in Sections 3 and 4, the profits of a firm should include that portion of wages, salaries, bonuses, and fringe benefits which exceeds those prevalent in the outside labour market. Also, a portion of business expenses (expense account outlays) which can be considered as supplementary incomes for executives, as well as a large part of expenditures for research and development, and the amounts transferred to certain types of reserves beyond the apopropriate levels should be added to what is given as "net profit" in the usual corporate financial statements. How large the profit in this sense in each firm and in Japan as a whole and how it is shared among workers, managers, and the shareholders are most interesting questions.

Although it is unscientific to argue without statistical evidence, I feel that a large proportion of the broadly defined profit of Japanese firms falls to the employees and managers. Take, for example, just business expenses (expense account outlays) of Japanese corporations. Their total amount now exceeds the total dividend payments. This was not the case until the 1960s.[11]

Nonetheless, facts on these matters are not readily available, and we must wait for a detailed statistical analysis of income distribution within and among Japanese corporations. It would be helpful, for example, to have a clear picture of the relationship between a company's profit and its salary and bonus levels based on corporate financial statistics.

A second area of inquiry with regard to the tendency of employees of large Japanese firms to share the firms' profits to a significant extent would concern how it has become possible for them to take part in the profit-sharing. In joint-stock companies, the shareholders are supposedly the owners, and the profit should return to them. A large part of this profit (perhaps the larger part) seems, however, to be now going to employees and managers. Why have the shareowners stood idly by? Why have they not resisted this "distribution revolution"? And why are they not now rebelling and attempting to reclaim a larger part of the profit?

My tentative answers to these questions are the following. The supply and demand relationships for capital funds and for persons with managerial skills changed greatly between the prewar (WWII) and postwar years, and so did the strength of a firm's organization with managerial resources in earning profits. Such changes altered the economic power relationships among capitalists, managers and employees.

These are the background for the "distribution revolution" in Japan which has taken place in recent years.

On the one hand, the savings rate of the economy as a whole rose substantially, bringing forth abundant supplies of capital funds. Capital markets were also modernized, making available the supply of equity capital as well as loans. Thus firms possessing superior managerial capabilities or the management that displayed strong possibilities of future growth were able to procure the funds they needed from capital markets or from financial institutions without much difficulty.

On the other hand, it was necessary to create a large, efficient organization to ensure continuity and steady growth, and to assemble and accumulate the managerial resources necessary for efficient business activities. Such organizations cannot be run by a single capitalist or a small group of capitalists who are owner-managers. In addition, steeply progressive income and inheritance taxes hastened the demise of the individualistic capitalists.

## Factors Determining the Distribution of Profits

A third area of inquiry would concern the factors that are thought to determine the pattern of profit-sharing. I have not yet reached a theoretical understanding of this point that is both logically consistent and factually convincing; nevertheless, some factors which appear to me to exert important influences on the pattern of profit-sharing can be indentified.

### (a) Comparison with other firms in the same industry

The levels of salaries, bonuses and fringe benefits given to employees of a firm, from the president and other full-time directors to rank and file, as well as the proportion of the profit shared by employees (including again, full-time directors) — that is, $\beta$ in equation (1) — seem to be affected much by the levels of salaries, benefits and profit-sharing ratios of similar-sized firms in the same industry. Labour mobility among large firms in the same industry is very low in Japan, nonetheless, profit-sharing within each firm is strongly influenced by what the firm's rivals — or "brothers" — in the same industry are doing.

One reason for this state of affairs is that maintaining a respectable salary schedule and benefits is vital for the firm if it is to retain its prestige and credibility within the industry, to preserve and bolster employee morale and to recruit promising young employees.

(b) The Firm's Growth Rate

Even if it seeks only to preserve a certain scale of operation, the firm needs to recruit and hire new employees to replace those retiring. And in order to secure the promising new graduates in the labour market, the firm must be able to convince prospective employees that it can offer them advantageous treatment throughout their professional or vocational careers.

If the firm is very small, and its rate of growth of employment is zero, it will need only to replace departing employees by recruiting only a few new employees each year or once every few years. The firm should be able to meet its labour requirements even if the benefits paid to existing workers are not too high. High-profit enterprises which have almost no possibility for expanding employment, such as luxury restaurants and hotels (the situation is quite different if they decide to expand as a chain) or speciality publishing houses that are famous in a particular narrow field, but are otherwise tiny opearations, would exhibit a behaviour pattern considerably different from that of the large firm. Their behaviour would be closer to that of the West European, especially Continental European, owner-operated firm. Employee benefit levels, in other words, would be held at a point only slightly above the level employee could earn on the open labour market and the ratio of profit-sharing with employees, $\beta$ , would be low. Moreover, the profit-sharing ratio would fluctuate widely depending on the size of the total profit. The greater portion of the profit, in other words, would redound to the capitalists.

The high-growth, large firm exhibits a different pattern. It must recruit new employees each year from among new high school and college graduates. In order to gain its ground in this market, the firm must offer a high level of monetary and non-monetary rewards to its employees and promise them attractive life-long working careers.

Since a high rate of growth of the firm's sales (or a high probability of such growth) commonly indicates that firm's profits (or expected profits) will be high, we can see that high growth will normally make possible high salary and benefit levels.

Compared with countries in which inter-firm mobility of workers and managers is high and profit-sharing elements play only a small part in non-executive employee earnings, however, we can see that the above situation can act as a check on the growth of high-profit businesses: it will reduce the part of profits that accrues to the capitalists and can be reserved or reinvested within the firm.

(c) Growth of the Firm and Capital Procurement

A situation similar to that just outlined exists with respect to capital procurement as well. If management of the firm is indeed completely dominated by the employees, headed by the top management, one may wonder why they do not keep all the profits for themselves. Why do they distribute some part of the profits to shareholders and reserve some of them within the firm? My answer is as follows.

A joint-stock company will need additional equity capital in order to grow. Moreover, at least a part of equity capital will have to be raised by issuing new shares: the rest may be met by retained earnings. Many firms, futhermore, need to borrow money or issue bonds just to continue to exist. To maintain a foothold or to improre, if possible, one's position in the capital and short-term financial markets, the firm must earn and distribute sufficiently high profits for the owner of equity capital and ensure that it can readily increase its equity capital and debt, whenever necessary.

What if the employee-dominated firm decided to switch from the joint-stock company to some cooperateive form, in order to avoid the trouble of having to make annual payments of dividends to shareholders and of having occasionally to ask them to provide additional equity capital? How would it be if the employees as a whole bought the 51% of the stock necessary to assure majority control, dissolved the company and reconstituted it as a cooperative firm entirely owned and controlled by employees?

I do not know whether such a scenario is legally feasible in Japan, but even assuming that it is, it is hard to see how such a move could work to the employees' benefit. It would likely result in a number of inconveniences. From the standpoint of economic advantage, it seems that by investing heavily and becoming the owners of their workplace, the employees would be assuming too great risks compared with the benefits derived. For the employees, instead of investing such a large amount of funds in the company in which they work, it would be far more advantageous to diversify their portfolios and invest the funds in several companies' stocks. Since the employees who share in the profits of the firm already hold a significant stake in the firm it would not be advisable to increase their holdings in the firm. Also, this scenario would involve an inconvenience in transferring the equity rights held by retiring members (or members who die after retirement) to new members.

In the light of these considerations, ~~we can see~~ that the present form of joint-stock companies with outside shareholders offers a high degree of economic rationality.[12]

## 5. Additional Remarks on the Behavioural Characteristics of Japanese Firms

In this article, I have attempted to demonstrate some of the structural characteristics (i.e., their lont-term organizational characteristics) of typical

Japanese firms, large firms in particular, which I believe are in contrast to typical firms in Western Europe and North America. I then proceeded to discuss the behavioural characteristics of Japanese firms as resulting from their structural characteristics. Because of the nture of the issue and the need to consider a wide range of points, the dscussion cannot be contained in a limited space. I have not been able to touch sufficiently upon many charactersitics of Japanese firms. What follows, then, are brief statements of my views on points I would like to emphasize and invite comments and criticisms from the readers.

(1) The Interests of the Labour and the Management

In a large Japanese corporation, the employer, that is, the management team representing the firm, and the labour union, which is organized separately company by company and contains only regular, full-time employees whether white-collar or blue-collar, experience conflicting intersts only to a limited extent. To the labour union, the firm is the goose that lays golden eggs, and it would not do to harm the goose, lest it cease to lay eggs. Seen from the management side, some of the employees who constitute the labour unions will one day be their successors.[13] The managers' incomes, moreover, are sustained by the entire employee group, and they have to cooperate to promote the growht of the firm and share the fruits of that cooperation.

Of course, the interests of the labour and the management differ in a number of areas. It is a mistake to believe that Japanese labour unions do not adequately protect the interests of workers. Indeed, an eminent British sociologist Ronald P. Dore states that Japanese labour unions play a more active role in improving working conditions and handling work-place complaints than do their British counterparts.[14]

Conflicts of interest arise when the firm runs into severe financial difficulties and has to discharge even some of the regular, "life-time" employees. Conflicts also exist within the employee group, in relation to the hierarchical structure. For example, it would not be far off the mark to argue that female employees, who have been treated more or less as "transient" or "peripheral" members of the firm, are "exploited" by the other employees. Temporary employees, part-timers, and outside worders, as well, are treated at substantial disadvantage compared with regular employees in terms of income and working conditions.

Just as unfavourable treatment of employees can prove disadvantageous from the management point of view especially in relation to recruiting new employees, an overly large bias in favour of the employee group in profit-sharing can cause the rate of profits and dividends to fall below the level acceptable in the capital market. The firm will then find its position in capital and financial markets considerably weakened and its ability to procure the funds necessary for growth impeded. Not only managers but also the leaders of the company-based labour union would therefore pay attention to the firm's rates of profit and dividends, and as a consequence they may appear to act in the interest of shareholders.

(2) Corporate Groups

The facts that Japanese firms endeavour to keep themselves "slim" and that the tendency toward specialization is strong, give rise to the phenomenon of groups of associated or interrelated firms. This is perhaps one of the pecularities of the industrial structure in Japan, and one that is difficult to understand by foreigners. The production and other business activities that in the West take place within a single firm are in Japan often spread across a number of firms, which carry them out under close cooperation.

These groups are coomonly known "keiretsu" or "firm groups", but I think one should distinguish three different usages of the term.

(a) The three old zaibatsu groups, that is, Mitsui, Mitsubishi, and Sumitomo.

(b) The "keiretsu" or "business groups" formed around, respecively, the Dai-Ichi Kangyo Bank, the Fuji Bank ( the Fuyo Group), and the Sanwa Bank. These three groups plus the three former zaibatsu groups constitute what are frequently referred to as the "six largest keiretsu".

(c) The industrial groups formed around a giant corporation. They are comprised of subsidiaries, allied firms, close customers, subcontractors (primary, secondary, and tertiary), wholesalers, retailers, etc. Examples include the Matsushita Group, the Toyota Group, the Hitachi keiretsu, and the Shinnittetsu keiretsu.

Of these three types of groups the third one, that is the group around a giant corporation (c) is not much different in nature from the industrial groups found in other developed countries. It may be mentioned, however, that (1) as mentioned in Section 1, large Japanese firms try hard to remain "slim", so that the group may contain quite a few firms in addition to the central firm. (2) Business relations within the group are based on the mutual (long-term) advantages for the parties involved. When a transaction takes place within a group, it is most unlikely that a firm will purchase materials or parts at a higher price than from firms outside the group or that it will purchase goods of inferior quality. If firms in a group engaged in such practices, they would soon fall behind the competition in their own fields. In other words, over the long term transactions within the group must conform to the same or even better standards of quality and lower prices as would prevail in transactions with firms outside of the group. Only when the conditions are advantageous to the parties concerned will the transaction take place within the group. (3) Relations between the firms in an industrial group are not based on short-term interests, nor do they always rely on contracts. Instead they are based upon mutual trust cultivated over the years between the top managements. Except for majority- or minority-owned subsidiaries and their parent, the trade relations within the group are not rigidly fixed but subject to change, and viewed from a long perspective, competitive forces have more than enough room to operate.

The old zaibatsu groups (a) formerly centred around respective zaibatsu holding companies, but since the disolution of zaibatsu immediately after the WWII a zaibatsu group became a loose coalition of the former subsidiaries of the prewar zaibatsu holding company, which is no more existent. Each group includes a bank, a trust bank, a trading company, a life insurance company and a casualty insurance company. The zaibatsu group features close trading relations based on established business relations and mutual trust over many decades. However, what was said in (2) above is fully applicable to this group as well. Merely because a transaction takes place within the group, it does not mean that the firms will tolerate inferior products at inflated prices. Moreover, in recent years the relative weight of intra-group transactions seems to be declining in each of the three groups.

Three groups in type (a) were once very tightly controlled by the zaibatsu holding companies as their respective headquarter. The current central organs of these groups, be it a monthly meeting of the presidents of member companies or a bank or a trading company, can exert only limited leadership. After the dismantling of zaibatsu they still behave in unison in such occasions as new business ventures in new industries (like petrochemical, aluminum refining , atomic energy, leasing), large-scale overseas projects, intra-group labour transfer from declining industries to rapidly growing ones and socio-cultural activities.

The three largest "keiretsu" not in group (a), that is, the Dai-ichi, Fuji, and Sanwa groups, have really little more than their respective monthly "company-president meetings", which are primarily of social nature, with little functional significance. These industrial groups are, threfore, more imaginary than real.

(3) Mark-up Pricing

According to the "mark-up pricing hypothesis" or the "full-cost pricing principle", the market price of manufactured products is determined by adding a certain "mark-up rate" to production cost. Among British economists and some Japanese scholars who are influenced by the former, this seems to be still an influential hypothesis.[15]

The hypothesis was derived from field work results of R.L. Hall and C.J. Hitch in 1938, half-a-century ago, and has been used without being much questioned until today. It is, however, inadequate in explaining price formation in Japan, and perhaps in Western Europe and the United States as well.

Manufacturers determine the price of their products not only according to produciton cost, but also according to the state of competition in the market, price elasticity of demand, pricing policy of the competitors and their own level of capacity utilization. Much evidence exist to suggest that it is unlikely that they would simply apply a mark-up rate to determine the price.

For example,

(i) Even for a high-technology product such as integrated circuits, when overproduction occurred as in 1985, the price of 64 DRAM plummeted to 120-140 yen, one-fifth of the 1984 level; 256 DRAM were selling at 330-440 yen in 1985, about one-tenth of the 1984 level.

(ii) There have been a large number of complaints against Japanese firms about dumping of their products when exporting to the United States.

(iii) When reporting the performance of companies, newspapers, magazines and the Quarterly Handbook of Listed Companies often contain descriptions such as "the sales figures of the departments that are not doing so well have been witheld", "sales this period include unprofitable orders accepted in earlier slack periods which barely covered costs, so that the recovery of profits will have to wait until the next period" (for shipbuilding, construction and plant engineering firms), "profits soared because of a large increase in the sales of a certain department which has a number of poroducts which no other company can compete with", and so on.

(iv) The price of ships and unit price of construction projects fluctuate widely according to the state of the shipbuilding or construction business. In times of depression prices can go down to half in a year or two, and when business is brisk they can double or triple in a short time.

(v) In Japan in times of depressed domestic demand often the so-called "export drive effect" works to increase export sales.

As mentioned in Section 4, Japanese firms are always searching for new directions of development. One area in which much R&D efforts are now concentrated is biotechnology, involving close to a hundred companies in diverse industries ranging from chemicals, chemical fertilizer, pharmacenticals, food, beer and fermentation. Companies now undertaking research in biotechnology include such outsiders as Hitachi and Toray. Another example is OA (office automation) business: over 50 companies from the fields of electric engineering, home appliances, computers, office machines, camera, precision instrument, audio equipment and computer software are already selling products in this area.

In short, in an economy as dynamic as Japan, where, on one hand, R&D on new products and advances into promising potential markets are brisk, and, on the other hand, old industries are rapidly declining due to reduced demand and competition from imports, old fashioned practices such as "mark-up pricing" cannot be widely maintained.

## Final Remarks

This paper adopts a positivist approach of assembling and analyzing facts related to the structural and behavioral characteristics of large Japanese firms as distinct from those of their American and European counterparts.

Some of the basic viewpoints in this paper have been the following. First, in Japan the separation of management and ownership in large firms has advanced much in post-WWII years, perhaps more than in any other major industrialized countries of the "West". Generally a firm's shareholders can now exercise little influence over its management, so long as it does not run into financial difficulties.

Second, in Japan since the 1950's as a result of the separation of management and ownership, the spread of the life-employment and seniority promotion systems and unprecedented economic growth, a well-managed major firm in each field has developed as a carefully built organization consisting of managers at various levels, engineers, skilled workers and other personnel and having managerial and technological expertise in its specialized field.

Most of the members of the top management of a large Japanese firm are selected from among those who have served the firm for a long time as regular, core employees of the firm.

The management of typical large Japanese firms may be better conceived of as the representative of the regular core employees of the firm, more than that of the shareholders. Thus large Japanese firms come to possess certain characteristics similar to those of the "labour-managed firm". I hypothesized that a typical large Japanese firm behaves so as to maximize, under a number of constraints and over a long run, the benefits accruing to its regular, core employees, and that the latter generally actively cooperate with the management for such an objective.

Third, with the life-time employment and seniority promotion systems it is advantageous for the regular, core members of a firm that the firm continues to exist at least and grow at a fairly high rate if possible. Some of the aspects of Japanese firm's behaviour are best understood in this context of the pressure from the inside towards continued existence at least and a high rate of growth if possible.

With these basic viewpoints I have attempted to discuss a number of problems and issues related to structural and behavioural characteristics of Japanese firms from a "positive" point of view. I have not entered, however, into any normative evaluation of these characteristics.

The discussions of the strengths and shortcomings in terms of economic efficiency or distributive equity, or how the shortcomings may be corrected without weakening the strengths of Japanese firms are outside of the present paper.

**Tables and Figures**

Table 1: The Number of Labour Unions and the Unionization Rate in Several Countries

| | Number of Unions | Unionization Rate (%) |
|---|---|---|
| Japan | 34,216 (1986) (an increasing trend seems to have stopped) | 28.2 (declining) |
| U.S.A. | 176 (1984) (declining) | 23.9 (1980) (declining) |
| Britain | 373 (1985) (fairly rapidly decreasing) | 49.8 (1985) |
| West Germany | about 20 | 41.5 (1986) |
| France | n.a. | about 20 (1983) |
| Sweden | about 75 | about 80 (1983) |

Source: Labour statistics of individual countries.

Table 2: A Comparison of the Size: Hitachi and Toyota with GE and GM

| Company | Sales (trillion yen) | No. of Workers (thousands) | No. of Shareholders (thousands) |
|---|---|---|---|
| Hitachi | 2.9 | 98 | 210 |
| GE | 6.1 | 359 | 483 |
| Toyota | 6.0 | 65 | 62 |
| GM | 17.2 | 876 | 854 |

Note: For 1986. Sales for GE and GM were converted at 167 yen per dollar.

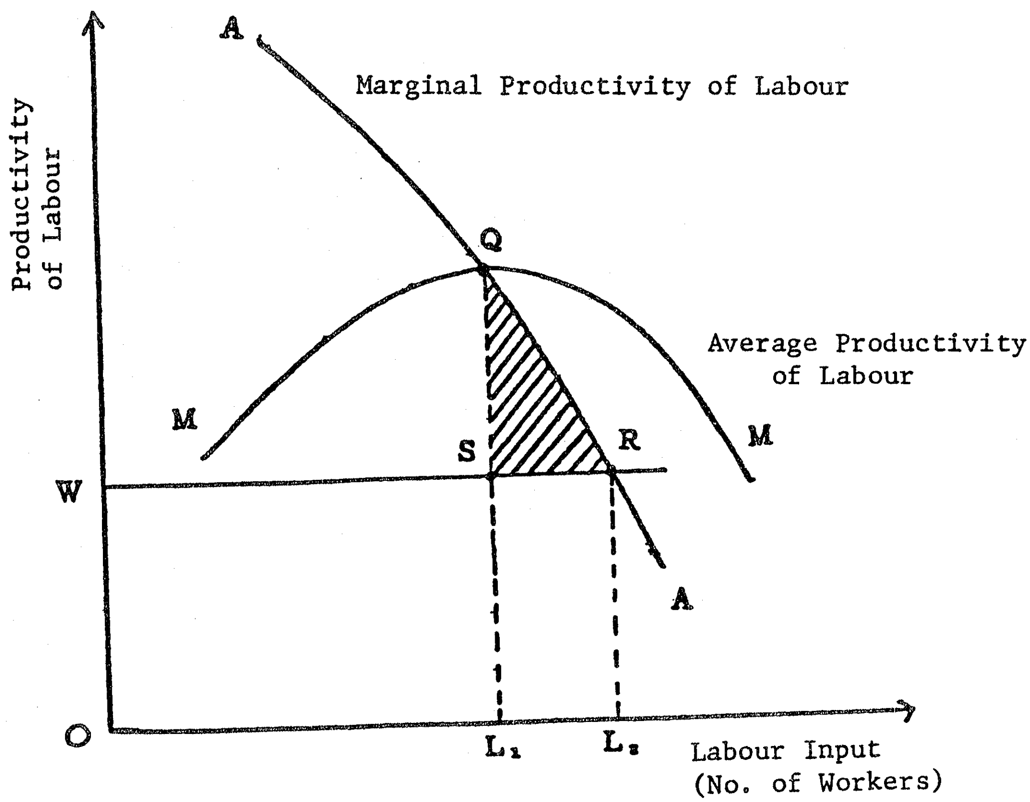


Figure 1: Equilibrium for the Labour-Managed Firm

## Notes

* This is a somewhat shortened, provisional English translation of a paper written in Japanese and published in Keizaigaku Ronshū (Journal of Economics, The University of Tokyo), Vol. 54, Nos. 2 and 3 (July and October 1988).

1. The proportion of the total labour force employed by firms with less than 300 employees for 1957 and 1969, and by medium- and small-size enterprises as defined in the text for other years, is as follows:

| | Manufacturing | Non-Primary, Industries (Including Manufacturing) |
|---|---|---|
| 1957 | 73.5% | 82.8% |
| 1969 | 69.0 | 78.3 |
| 1978 | 73.4 | 81.1 |
| 1981 | 71.9 | 81.4 |
| 1985 | 71.8 | n.a. |

2. If unlisted companies are included, the largest (in terms of employees) private companies in Japan, excluding those which were formerly government-owned, is Japan Life Insurance Company (90,000). It is not a joint-stock, but a mutual company. The largest Japanese companies are much smaller than largest American companies in terms of the number of employees, such as General Motors (876,000 employees in the United States), Sears and Roebuck (485,000) and IBM (403,000).

3. Tadanori Nishiyama, Away from Capitalism, Bunshindo, 1983, passim. I find his analysis of facts fascinating, but cannot agree with some of his assertions.

4. Nearly thirty percent of the Japanese labour force consists of independent proprietors and their family members working for them. Thus the remaining 35-40% comprises highly mobile labour not covered by the lifetime employment practices.

6. Tadanori Nishiyama, Japan Is Not a Capitalist Society (in Japanese), Mikasa-shobo, 1981, p.130.

7. It may be argued that if non-member workers can perform any kind of work as productively as member workers, members would do better not only by employing the outside, non-member workers represented by $L_1L_2$, but also replacing the member workers, perhaps as they reach the retirement age, by non-member workers and hence sharing the surplus (profits) among the reduced number of members. It would be best for a very small number of workers to restrict membership as much as possible and to hire the outsiders at the going wage rate and exploit them.

But this is obviously an absured picture of a labour-managed firm. It is better to presume that certain essential functions within the firm cannot be assigned to the non-member workers or that workers do not or cannot perform as productively as member-workers unless allowed membership and entitled to profit-sharing. It would be more realistic to assume that there are certain kinds of jobs which can be done well either by members or non-members, and some others which can be done efficiently only by members who have interests in the firm's profits. Apparently Japanese firms are assigning the former kinds of jobs as much as possible to outside, non-member workers.

8. A similar relationship pertains with regard to capital as well. The distinction between loans from financial institutions or corporate bonds, on which only interest at the market rate is due, and stocks (equity capital), which receive a share of the profit, somewhat resembles that between the incomes received by non-member and member workers of the labour-managed firm.

9. From a number of simplified hypotheses, J.H. Dreze has shown that the equilibrium established in a capitalist economy, in which all firms simply attempt to maximize profits is exactly the same as the equilibrium established in a "labour-managed" economy, in which all firms seek to maximize workers' per capita income.

See J. H. Dreze "Some Theories of Labour Management and Participation", Econometrica, November 1976. However, his proof rests on the hypothesis that any firm can imitate another firm's production function and commence production in the same manner as the other firm. In other words, any firm could start right away doing what IBM or Sony does simply by assembling the same number of workers (L) and the same amount of capital (K). This sort of proof demonstrates how meaningless are the assertions of some abstract theories.

10. In the current Japanese environment, the firm must raise the wage and salary levels by several percentage points annually. In order to maintain a certain level of employment, therefore, the firm must expand its sales by a comparable percentage each year.

11. Of course, not all business expenses should be thought of as the distribution of profits. And it goes without saying that the distribution of this benefit is highly hierarchical.

12. Since in a joint-stock company the financial risks accompanying the firm's management are assumed by possessors of capital (capitalists?), that is by the shareholders, who provide the firm with owned capital (although, as argued here, a part of the risks in Japanese firms is borne by the employees) and since some of the owners of capital earn large incomes, the claim that the Japanese economy is "not capitalistic" (See Tadanori Nishiyama, op. cit.) is not convincing. On the other hand, the assertion that "Japan is a capitalist country" is no more convincing. In either case a clearer definition of capitalism is needed. Until such a definition is given, the question of whether or not Japan is a capitalist country falls back readily on tautology. In my views, the Japanese economy is based upon private firms and competitive price mechanism, with which the government interferes directly and indirectly through its economic policies. Owners of capital funds play a limited role within this framework.

13. According to a recent survey, 96% of Japanese top management executives were formerly members of their firm's labour union, and some 30% had at one time been union officials (members of the central executive committee, the central commitee, etc.).

14. See R.P. Dore, Japanese Factory, British Factory, Berkeley: University of California Press, 1973. This famous work details a number of differences between Japanese and British firms, and offers a number of interesting insights.

15. For example, M. Kalecki, Joan Robinson, J.R. Hicks (the notions of fix-price and flex-price), and Morishima Michio (The Economics of A Country with No Resources, in Japanese, Tokyo: Iwanami Shoten, 1984). Recent papers on macroeconomics by British economists that are based on this hypothesis are too many to be named.