COMPARATIVE ANALYSIS OF PRICES, WAGES, AND LABOUR MARKET STRUCTURES IN BRITAIN AND JAPAN

Some Implications for an Incomes Policy and Other Anti-inflationary Policies -

Nobuhiro Uehara

Master of Literature,
University of Glasgow, 1971.

ProQuest LLC.
789 East Eisenhower Parkway
P.O. Box 1346
Ann Arbor, MI 48106 – 1346

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INTRODUCTION - CURRENT CONTROVERSY SURROUNDING THE WAGE-PRICE ISSUES -

1. Inflation as a Universal Problem

A current economic problem shared by many countries, either developed or developing, is price inflation. It may not be a real problem for some of the planned socialist economies like the USSR and East Germany. On the other hand, a galloping inflation, which has faced some developing countries like Chile and other Latin American countries, must be a serious threat to the normal operation of their economy. In most of the developed industrial countries, however, a creeping inflation, characterised by the gradual but persistent rise of the price level, prevails today. An inflation of this type, though perhaps not so immediately harmful, still raises various medium - or long-term problems, such as misallocation of resources, unequitable distribution of income, unfavourable effects on the balance of payments, and so on.

Table 1 - 1

Index of Consumer Prices and Earnings in Manufacturing Industry for Selected Countries in 1968 (1960 = 100)

Country	Consumer prices	Earnings	Country	Consumer prices	Earnings
Chile	606	950	Australia	120	133
Colombia	246	270	West Germany	120	288
Ghana	188	165*	Tanzania	119	365
Philippines	180	139	United States	118	133
Turkey	157	192	Ceylon	118	116
Denmark	155	220	Belgium	114	176
Finland	154	192	Switzerland	113	173
Japan	153	201	Poland	111	133
Italy	137	192	Bulgaria	110	142
Netherlands	134	212	Czechoslavakia	106	120
United Kingdom	133	161	East Germany	101	103
France	127	181	USSR	100	136
Canada	122	190			

* Figure for 1967.

Source: United Nations Statistical Yearbook.

One of the characteristics of those industrial economies is that despite the rising price level, the real income level of the nation has been increasing steadily and substantially but at a slower rate than the money income level since the Second World War (1). Besides, income from employment like wages and salaries represents by far the largest share in national income in the industrialised countries, so that the movements of wages and salaries have much greater bearing on the trends in national income than those of incomes from other sources.

Although the money wage level has so far risen faster than the general price level in the developed countries,(2) the increases in money wages have lagged behind those in prices, so that the real wage level has actually fallen, in some developing countries like Ceylon and the Philippines (and probably Ghana). As regards the omnipresent fact that money wages and prices go up concurrently, however, there is no clear-cut relationship between their rates of increase, universally applicable to all countries. Even if we limit ourselves to the cases of Western countries between 1960 and 1968, for example, the Danish rates of increase of consumer prices and wages were both quite high, as compared with other European countries,

(1) E.H. Phelps Brown, A Century of Pay (1968), showed that this was not a peculiar post-war phenomenon but, since the close of the last century at least, the real income level had continually risen with frequent fluctuations in Western industrial countries (p. 301).

(2) Both the average annual rates of increase in money and real wages have been much higher after the Second World War than before, in Western countries (See Phelps Brown, op. cit. pp. 67, 221 241, 312). Moreover, before the war the real wage level sometimes fell in the short run, say, in less than ten years' period, even in these countries (ibid., pp. 159, 258-9).

and those of Britain were both rather moderate, while in West Germany the price increases were mild but the rate of increase in wages was very high.

Not only the levels of prices and money wages have risen but also the structure of prices and wages has lost downward flexibility in many advanced economies since after the Second World War; in other words, prices and wages generally have come to rise unidirectionally (1). It seems that this phenomenon is also observed in many developing countries in recent years, for as far as the United Nations index numbers of consumer prices are concerned, they scarcely dropped below the previously attained level in these countries during the period between 1960 and 1968.

Another fact characteristic of the developed economies suffering from creeping inflation is the achievement of continuing full or near-full employment after the Second World War. These countries have experienced mild recessions since 1945 but not a serious, prolonged depression and unemployment rates are much lower than the pre-war average throughout the industrial world (2). A third fact is the ubiquity

(1) There were more fluctuations in the level of prices (and even money wages in severe depressions) with the trade cycles before the Second World War, though money wage rates offered strong resistance to downward pressures, which was true long before 1914 and did not seem to depend on trade unionism (Phelps Brown, "The Long-term Movement of Real Wages", in the Theory of Wage Determination, J. Dunlop (ed.) (1957), pp. 48-65), but thereafter both money wages and prices did not fall below a previously attained level and have had persistent upward tendency in developed market economies. This is also the case in developing countries in more recent years (Source: UN Statistical Yearbook).

(2) L.G. Reynolds, Labour Economics and Labour Relations (1964), p. 340. Also see OECD main economic indicators and Phelps Brown, op. cit., pp. 222-3 and 234-5.

of market power in the modern economy. In the labour market there has been the rise of trade unionism and the general acceptance of a collective bargaining, as part of the normal economic life, which sets wages and other conditions of work over a wide area of the modern economy. Parallel to this has been the development of big businesses and other producers' pressure groups which interfere with the price-determining processes of the competitive market.

2. Cost Push versus Demand Pull Arguments

In the face of those facts, new controversy has arisen around these contrasing hypotheses of demand-pull and cost-push inflation. The essential difference between them is in the question of which, a cost increase or excess demand, initiates the particular inflationary process. For, if one inflation of either origin gets under way, cost increases and demand expansions tend to proceed hand in hand as long as a high level of employment is maintained. In this context, if we borrow the concepts which F. Machlup has invented to elucidate the points of the present arguments, the prime mover of a demand-pull inflation is "autonomous" expansions of demand, which are followed by "responsive (competitive)" increases in prices and wages, while the trigger of a cost-push inflation is "aggressive" increases in wage rates and/or material prices, which are followed by defensive increases in prices and wages in other sectors of the economy and "induced" and/or "supportive (compensatory)" expansions of demand (1). As a matter of fact, however, it does not seem so

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(1) F. Machlup, "Another View of Cost-push and Demand-pull Inflation", Review of Economics and Statistics, vol. 42 (1960), pp. 125-39.

easy to discern between autonomous and supportive (or induced) demand expansions or between aggressive and responsive increases in wage rates or prices in an inflation already in progress.

The idea of aggressive and defensive increases in prices and wages presupposes the existence of market power which is able to interfere in the price - (or wage -) determining processes and the idea of supportive expansions of demand, the active intervention of the government or the monetary authorities in the free market economy to maintain full employment. For, if all prices and wages are determined under perfect competition, as classical economics tells us, then there is no room for the practical application of either of such ideas because full employment is automatically achieved through adjustments by competitive market forces and the stability of the general price level mainly depends on the quantity of money supplied. In actuality, it is widely believed that a considerable number of prices and wages are more or less "administered" by powerful economic interests groups, such as big businesses, trade unions, farmers' organisations, and associations of other self-employed persons, although we do not know for certain how far the influence of these groups on prices or wages reaches, and that the interferences of these groups with individual prices and wages at the micro-economic level will eventually result in the increases in money incomes exceeding those in national output at the macro-economic level. Since it is essential to the stability of the general price level that the changes in the structure of relative prices should be such that the increases in some prices are offset by

reductions in other prices, especially those in sectors with high productivity growth, some industries or socio-economic groups may have to acquiesce in price reductions or falls in their incomes relative to those of other groups. But in practice, affected groups offer a strong resistance to such reductions of prices and relative money wages in which they have a stake, if they are able to do so. As a result, the general levels of prices and money wages are said to be inflexible downwards. Under these circumstances full employment is not always achieved automatically through market adjustments of prices and wages. Thus, if deficient demand arises at a given level of prices and wages, the monetary authorities are obliged to supply enough money to expand demand. This logic, however, contains some unquestioned but questionable assumptions. Why do trade unions demand such large wage increases that unemployment among their members would result? Or why do managers concede such large wage increases that they might be obliged to pass on to the consumer as price increases, which would result in a fall in their sales (and possibly in smaller profits) unless the demand for the commodity concerned is quite inelastic? If they behave in anticipation of that demand-expanding policy of the government which makes up for losses which they would otherwise suffer, what is needed is to put an end to such anticipations by suspending the expansionist policy.

It is debatable, particularly in Japan where full employment has failed to be considered a major objective of the national policy in practice, that the monetary authorities do only passively create more

money or lower interest rates as preventive measures in anticipation of an increase in unemployment. It may be more correct that the monetary authorities in Japan have deliberately expanded money supply so as to facilitate capital formation in industry, in the long run, and have sometimes been obliged to contract it, in the short run, when the balance of payments turned unfavourable. Here the question is still to be answered whether the increases in prices and money wages arising in the full-employment economy are the results of aggressive actions of market power or the mismanagement of fiscal and monetary policies. If the price inflation has ensued from excess demand, the policy to be adopted is obviously the one of controlling demand. If the inflation has resulted from the aggressive increases of prices and wages by powerful economic groups, then a policy, such as an incomes policy, which puts a curb on, or persuades these groups to restrain from actions potentially harmful to the national interests will be required for price stability. In the case of creeping inflation, it is often said that the traditional policy tools like fiscal or monetary policies have proved not to be very effective for price stability in a growing economy. More exactly, it is argued that it is not politically feasible for the government committed to full employment and steady economic growth to pursue such demand-curbing policies as far as to entail high unemployment and economic stagnation in return for price stability. Neither have the incomes policies been very successful but may, in Britain, later have increased wage inflation as the unemployment level rose (1).

(1) See R.G. Lipsey and J.M. Parkin, "Incomes Policy: A Re-appraisal", Economica vol. XXXVII, no. 146 (May, 1970).

One of the reasons for the virtual collapse of those policies in face of creeping inflation is the inadequacy of our knowledge of the actual price - (or wage -) determining mechanisms in detail. Unlike hyperinflation, creeping inflation seems to require a more detailed and more precise diagnosis. There are many markets with different structures, ranging from competitive to monopolistic markets, and the mechanisms determining prices and wages probably differ from one market to another accordingly. Besides, these individual markets for different commodities and production factors are intertwined with one another. For example, a change in the price of some basic material may have impact on the prices of the products using it as an input. Or a change in the price of a commodity may influence the prices of other consumers' goods through a change in the allocation of household expenditure. And consequent changes in these prices may bring about repercussions on the prices of other commodities, including the price which has caused the initial change, which may be followed by further repercussions on prices. Thus a chain reactions continue, which may eventually bear on the general price level. Advocates of the cost push hypothesis assert that wage increases in a high-productivity or excess-demand sector spread out or spill over into the rest of the economy and eventually push up the general money wage level at a faster rate than national productivity rises. But our empirical knowledge in this field is still limited. How far will the impact of a particular wage increase in a sector reach and how much will the wages in other sectors be affected as a result? Furthermore, what are the effects of this particular wage increase together with a subsequent chain reaction in other wages on the

general price level on the whole? These questions seem to be particularly important in relation to creeping inflation.

In a growing economy with a constantly changing structure of supply and demand the concurrence of excess demand in some sectors of the economy and deficient demand in others is normal, even if demand and supply are balanced on the aggregate basis. As C.L. Schultz pointed out (1), the impact of excess demand in industries producing basic materials is transmitted to the rest of the economy as a rise in the cost of production in the latter. If we assume perfect markets for factors of production, an excess demand in a sector would promptly be offset by deficient demand in other sectors through the transfer of factors of production from the latter to the former, and the state of the market would become uniform over the economy. Then we could solve the problem of imbalances between demand and supply on the aggregate basis. But in the real world where factor mobility and competition are limited and prices and wages tend to have a downward rigidity, an excess demand in a sector, even if balanced by deficient demand in other sectors, is liable to lead to a rise in the general level of prices (2).

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(1) "Recent Inflation in the United States" in Employment, Growth and Price Levels (Hearings before the Joint Economic Committee, 86th Congress, 1st session, May 25-8, 1959), pp. 4-10.

(2) R.G. Lipsey used this sort of argument to explain the phenomenon of the "loops" in the relationship between the rate of wage increase and the level of unemployment (See "The relation between the level of unemployment and the rate of change of unemployment in the U.K., 1861-1957: a further analysis", Economica, (February, 1960), pp. 21-23.)

Among the individual prices and wages, some have a greater bearing on the general price level than others, so that the movements in the former have more important policy implications. For example, the impact on the general price level of a change in the prices of basic materials or those goods which fetch a large share of the national expenditure may be greater than that in the prices of commodities with a limited demand, like jewels and curios. The same argument holds true of the wages. In America manufacturing industries the practices of what is termed "pattern bargaining" are rife in which an industrial federation of trade unions singlesout one leading employer (a "wage leader") in the industry concerned and negotiates with him for wage increases and improvements in other conditionsof work and the terms and conditions of employment so settled between them are applied, at least as a target in the following negotiations, to all other employers in the same industry. (1) The wage increases settled with a representative employer thus spread out more or less throughout the industry concerned. Obviously the policy measures directed towards these "strategic" prices and wages will be more effective and more important than those towards other prices and wages.

3. Incomes Policies as Recipes for Price Stability

The causes of creeping inflation are still debtable. So are the appropriate recipes for price stability. After the Second World War many governments of the Western countries whose economy

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(1) L.G. Reynolds, op. cit., pp. 165 - 7.

actually suffered from persistent inflation and which found the traditional policies of demand management not quite effective against it have embarked upon the experimentation of various policies lumped together under the heading "incomes policy", besides their continued dependence on demand-management policies. Although those policies are more or less similar in that their major aim is to secure economic growth (and full employment) without inflation by directly interfering in the processes of income determination and that they are implemented mainly through voluntary cooperation on the part of major powerful socio-economic groups, especially trade unions and employers' associations, they differ considerably in detail from one country to another (1).

In the United Kingdom the germ of the idea of an incomes policy already existed immediately after the Second World War and 'every chancellor has emphasised the need for incomes to be kept within the limits set by productivity increase in the economy' (2). An appeal for restraint was made in a White Paper "Statement on Personal Incomes, Costs and Prices" in February, 1948. It was not until July, 1961 when the Conservative government decided to take severe restrictive measures, including a "pay pause", in order to cope with recurrent balance of payments crises, that the idea was embodied in a government policy with concrete proposals, such as the fixing of a "guiding light" for wage increases, the establishment of a wage review body (the National Incomes

(1) For brief description of incomes policies of Western countries, C.T. Saunders, "Macro-Economic Aspects of Incomes Policy", in A.D. Smith (ed.), The Labour Market and Inflation (1968), Chapter 2.

(2) Peter Donaldson, Guide to the British Economy (1969), p. 199.

Commission), etc. But the Conservative policy ended in frustration partly due to lack of trade unions' cooperation. Then the Labour government which took office in October, 1964 inherited the general framework of the Conservative incomes policy and developed it on a more comprehensive basis, that is, a policy covering not only wages and salaries but also all other forms of income and prices (it was therefore christened "Prices and Incomes Policy") (1).

The basic rationale of the British incomes policy so far developed is that in order to keep the general level of prices stable, total money incomes should not be allowed to rise faster than real national output. More specifically, the average rate of annual increase of money income per head should be kept within the limits (called a "guiding light" under the Conservative policy and a "norm" under the Labour's policy) set by an average annual rate of growth in output per head, though this requirement 'does not mean that all forms of income should increase at the same rate' (2). Increase in incomes above the norm may be permitted, if required in the national interest - to improve productivity, to facilitate labour mobility, or to meet the claims of social need and justice (which are regarded as cases of exceptional treatment), but such exceptional income increases need to be balanced by lower than the average increases to other groups in order for the increases in incomes over the economy as a whole to be kept within a fixed norm. As for the actual application of a norm and the criteria

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(1) For more detailed description, Brian Tew, The British Economy, Problems and Prospects (1968), Chapter 4.

(2) White Paper on the Prices and Incomes Policy (April, 1965), cmmd 2659.

criteria for exceptional treatment, a National Board for Prices and Incomes, which was created as the machinery for incomes policy under the Labour administration, put under review particular cases of price and wage increases referred to it by the government. Apart from short-term incomes restraint and these rough criteria for exceptional treatment, the British incomes policy, declaring that 'it would be impracticable and undesirable to lay down detailed rule so as to provide an indication of what changes in wages and salaries were warranted case by case' (1), did not set out what the general pattern of income distribution ought to be in future so that there was in practice no principle for guiding specific movements of incomes. This seems to have ensued from a rather hurried and easy compromise between different interested parties, which the government was obliged to make in face of the urgency of the balance of payments crisis. One student of the subject pronounced that 'Britain has no incomes policy.' (2). Sure enough it is extremely difficult, in a democratic society with a capitalist market economy, to secure political consensus of all members of the society for a policy which may alter the relative shares of national income adversely to the interests of some members, even if it does not mean decreases in their absolute levels of income. It is said that the British trade unions have strong inclination to maintain their established wage relativities. (3). In addition, although

(1) White Paper on the Prices and Incomes Policy (April, 1965) cmmd 2659.

(2) J. Corina, The Development of Incomes Policy (1966), p. 29.

(3) See H.A. Turner, "Inflation and Wage Differentials in Great Britain", in J.T. Dunlop (ed.), The Theory of Wage Determination (1957), pp. 123-35. Also see E.H. Phelps Brown and J. Wiseman, A Course in Applied Economics (1964), p. 236.

the government repeatedly emphasised that their incomes policy was intended to cover all forms of income and that measures would be taken to curb excessive profit increases, the policy still centred on earned incomes because they were the most important element in the cost of production, representing about 70 per cent of national income in Britain.

The means of implementing the British incomes policy, as in most Western countries, is in principle an informal control over incomes, such as direct persuasion by the government of trade unions, employers and 'all others concerned with the determination of incomes' (1), or indirect persuasion of them through the pressures of public opinion, for restraint. Immediately after returning to power, the Labour government started preparations for the implementation of an incomes policy by winning a formal support of the policy by both sides of industry. The result was published in the form of a Joint Statement of Intent, signed by representatives of the government, the TUC and the major employers' organisation, in which the principal directions of national policy were laid down (2). Although at the early stages of the policy the government expected much of trade unions and management for their voluntary cooperation, prices and wages continued to rise further during the ensuring year. Subsequently the government gradually increased elements of compulsion in the policy, for example, the adoption of an 'early warning system' in 1965 and the enactment of

(1) White Paper (op. cit.)
(2) The Joint Statement of Intent on Productivity, Prices and Incomes (1964).

legislation for the policy (the Prices and Incomes Act) in 1966, which formally invested the government with statutory powers on prices and incomes, such as the power to delay pay and price increases (1). Despite the strengthening of compulsory elements, there was no sign that the effectiveness of the policy particularly increased, but the government at last put into operation controversial Part IV of the Act prescribing the government's powers to stop price and wage increases for a certain period. Even these severe measures ended in frustration, which eventually led to the devaluation of the pound sterling in November, 1967. After the enforcement of the Part IV trade unions were inclined to be more hostile towards the policy, and especially towards statutory controls over wages. Thus Britain's 'voluntary' incomes policy completely collapsed.

The British experience reminds us of how difficult to carry out an incomes policy based on the voluntary cooperation of conflicting interests groups effectively. A 'true' and long-term incomes policy cannot remain as a pure 'economic' policy (2). It has become clearer that the influence of an incomes policy is more complicated and more far-reaching than economists might have originally thought. It has profound socio-political implications as well: what is the ideal pattern of income distribution for different socio-economic groups; how the freedom of individual members of the society in seeking their self-interests should be curbed before the general objectives of the

(1) C.D. Drake, Labour Law (1969), pp. 104-7.
(2) L.H.J. Crijns, "Incomes Policies and the European Economic Community" (Chapter 5) and F. Sellier, "Collective Wage Bargaining and the Conditions for Active Mediation" (Chapter 6), in A.D. Smith, op. cit.

society; how national income should be divided between investment and consumption; and so on. The problems involved touch the very foundations of the Western society. The true nature of the problem is related to class struggles which Karl Marx regarded as the central forces of social evolution in his celebrated Communist Manifesto (1). But his model is too abstract and rather oversimplified, like that of marginal analysis, and equally divorced from the real world. The proletariat as well as the bourgeoisie is not so homogeneous a socio-economic group as he assumed, just as labour is not so homogeneous in quality as assumed in marginal analysis. The differences between trade union and management may often be overshadowed by the differing interests within either the union or management organisation or by the common interests of management and union men at various levels in the plant (2). The working class has increased in size and power, as Marx predicted in the middle of the last century, but not in unity. More recently, as the workers have become a predominant group in industrial countries, the division of interests within the working class has become more evident. This has complicated matters further. 'The long run case for an incomes policy is that it can create order out of an industrial jungle.' (3) For all that, the conflict between the capitalist and the worker has not ceased nor is likely to cease to exist. The organised labour strives for a

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(1) R. Freedman (ed.), Marx on Economics (1962), pp. 11-23.
(2) James W. Kuhn, Bargaining in Grievance Settlement: The Power of Industrial Work Groups (1961).
(3) J. Corina, op. cit., p. 54.

larger share of output and the capitalist tries to prevent their profits from being eroded. When the latter fails to resist the former's demands, he passes on as price increases in order to maintain his share of output. Thus the capitalist - probably together with the organised labour - can indirectly exploit the consumer, particularly the unorganised part of the working class and pensioners, instead of openly and directly exploiting his employees who are organised, as was often the case at early stages of industrialisation. In advanced industrial countries, as the organised part of the working class has expanded and become conscious of the magnitude of its collective power, this method of exploting through inflation the consumers of which the organised labour constitutes a large part has proved to be a dead-end expedient because it only induces a price-wage spiral. Besides capital and labour, there are other socio-economic groups which want to insist on their own existence, in the present society. It makes still more difficult the formulation and implementation of an effective incomes policy as policy of coordinating differing sectoral interests of different members of the society.

4. Controversy over Anti-Inflationary Policies in Japan

In Japan there has been much controversy over the causes of the current inflation. As we shall see in Chapter 3, during the last decade or so, consumer prices soared while wholesale prices were relatively stable. What is more, Japanese export prices were almost constant. As a result, Japan has not had serious balance of payments difficulties in recent years (1). Partly on this account, despite public

(1) See foot note (1) in Chapter 2, p. 26.

resentment against the rising consumer prices, the Japanese government has concentrated its efforts on promoting economic growth rather than seriously pursued policies for price stability which might have thrown cold water on her rapid economic growth. It proclaimed in March, 1962 its intention of adopting comprehensive price stability measures including the hardening of the anti-monopoly legislation, a labour market policy, restraint on public charges and fees, etc. But consumer prices went up by nearly 7 per cent in the course of the same year. In the following year a consultative committee on the price problem was set up under the Economic Planning Agency but in practice nothing but a temporary standstill of price increases in the public sector was achieved. The accelerated consumer price increases coupled with gradual rises in wholesale prices in the latter half of the 1960's has worried the government and induced it to tackle the problem more wholeheartedly. Subsequently a Price Stability Policy Council directly responsible to the Prime Minister has been set up to look into the problem of rising prices and to seek appropriate anti-inflationary policy measures. Thus the priority given to price stability has apparently been high amongst the major objectives of its economic policy in recent years, though it has rarely been accompanied by further concrete measures.

One reason for the government's unreadiness to combat inflation is, besides favourable balance of payments, its persistent attachment to that economic policy looking to the interests of producers in industry and agriculture and neglecting those of consumers - there

are several powerful Ministries promoting the interests of producers but no Ministry exclusively designed for the protection of those of consumers. According to a research work on wholesale prices in Japan (1), the government has been in one way or another interfering in favour of producers with the determination of the prices of as many as 242 out of 770 commodities covered by the survey of movements in wholesale prices by the Bank of Japan: For example, many domestic farm products are protected against competition from abroad by import restrictions or protected in favour of farmers by price-pegging measures which allow the prices of such products to move upwards but not downwards; A considerable number of small firms are allowed to form cartels (whether or not on the government's tacit initiative) to support or raise the prices of their products; and so forth. The Price Stability Policy Council rightly pointed out in one of its recommendations and proposals that such a government protection of producers contributed to increases in prices (2).

Another reason, equally important, is lack of national consensus about the true causes of the current inflation and necessary policy measures. Although the problem of price inflation has been under discussion in Japan, as in other countries, since the Second World War, there is yet no established theory explaining the current inflation but opinions on its causes are still divided among scholars. The cost push hypothesis has, as might be expected, attracted strong support

(1) Y. Koike and S. Ohki, "Oroshiuri-bukka ni Miru Hendo to Kochoku-sei", H. Kumagai and T. Watabe (eds.) Nihon no Bukka (1969), Chap. 9.

(2) Gyosei Kansho to Bukka (April, 1970).

from employers' organisation and certain government circles. In this connection, the Economic Council, a Prime Minister's advisory body in charge of national economic planning, asked an independent group of five university professors to study the applicability of an incomes policy to the Japanese case, in February, 1967 and received a report from the group in September, the following year (1). The report, which did not analyse the going inflationary process nor did particularly support the adoption of an incomes policy but suggested the usefulness of the policy under certain conditions, was a starting-point of current controversy over the policy in Japan (2). The advocates of the wage-cost push hypothesis have emphasised the fact that wage increases outpaced productivity growth over the economy as a whole in recent years, and that the size of the wage advances settled through collective bargaining have tended to increase over time. But this fact is not necessarily the evidence of cost push, as F. Machlup pointed out (3):

'Even some highly seasoned economists have fallen victim to another logical snare: that any increase in money-wage rates that exceeded the increase in labour productivity was a sure sign of a wage push. Yet, even if there were no labour union in the country and no worker ever asked for higher wages, a demand-pull inflation would eventually pull up the wage level; and if the demand pull were such that

(1) H. Kumagai et al., Bukka, Chingin-shotoku, Seisansei Konkyukai Report (1968).
(2) See Toyo-keizai, special issue (24 Oct., 1968).
(3) F. Machlup, op. cit.

prices and wages rose by any percentage above two or three a year (....) money-wage rates would be up by more than the rate of increase in productivity.'

A more sophisticated hypothesis along the same lines, which has won a substantial support among professional economists and some government policy makers, is the so-called "productivity gap inflation hypothesis" (1). The gist of the hypothesis is as follows:

In the process of economic growth labour productivity over the economy as a whole rises but its rate of increase differs from one sector to another. The Japanese economy has been characterised by a so-called "dual structure", i.e. a structure in which a high-productivity sector, consisting of large manufacturing firms producting capital goods with superior technology (hereafter called the "modern sector"), coexists with a low-productivity sector of small manufacturers, distributive trades, service industries, and agriculture, mainly supplying consumer goods and services (hereafter called the "traditional sector") (2). The increases in labour productivity are generally very much larger in the modern sector than in the traditional sector. And the wage differentials between the two sectors have been remarkably great in Japan (3). As the labour markets become tighter, the traditional sector which finds it more and more difficult to retain or recruit required manpower at their going low wage levels is obliged to pay higher wages, keeping up

(1) For the same sort of argument, see P. Streeten, "Wages, Prices and Productivity", Kyklos, vol. 15 (1962), pp. 723-31.
(2) For further knowledge of this matter, for example, see S. Broadbridge, Industrial Dualism in Japan (1966).
(3) For further analysis, see Chapter 5.

with wage increases in the modern sector where it is relatively easy to absorb wage increases by rapid improvements in labour productivity and recruit workers at the going wage levels. As a result, the wage cost per unit of output in the traditional sector rises, which causes an upward movement in prices of their products because of difficulty in raising labour productivity, while in the modern sector wage cost and prices are more stable. Thus price increases in the traditional sector raise the general price level.

This hypothesis does not, however, account for the absolute level of prices but merely for changes in the structure of relative prices. The question which comes to our mind at once is why prices in the modern sector, despite relatively large improvements in labour productivity, have been stable instead of falling to such an extent that the increases in prices in the traditional sector are offset (1). Some blame market power for administering prices but it is difficult to find empirical evidence to support this view in fact. As shown in Chapter 2, in Japan, even oligopolistic or monopolistic firms have been subject to potential competition because of the market expansion accompanying rapid economic growth and there does not appear to be a definite correlation between industrial concentration and price movements in Japan (2). Another view is that downward rigidities in prices are due to general excess demand. According to this view, the potential downward tendency of prices in the modern sector, resulting from high productivity improvements, has

(1) See H. Kato, "Kimetononai Bukka-ronso", Ekonomisto, special issue (20 March, 1970).

(2) See S. Seikiguchi, "Bukka Mondai niokeru Dokusenteki Kanri-kakaku" H. Kumagai and T. Watabe (eds.) op. cit., pp. 208-43.

been weakened by strong demand pressures for their products (mainly producer's goods) brought about by the bunching of investment, which is encouraged by a generous money-lending policy of banks, as shown in the next chapter. Either of the above-mentioned views admits that in the traditional sector the market is so competitive that there is little room for price administration by market power, though some of the prices in this sector are deliberately administered through cartels or other restrictive practices formed under the government protective policy, and therefore, that the increase in the prices in this sector is supported by excess demand resulting from the rising general level of wages.

As mentioned earlier, the process of creeping inflation is extremely complex and it is difficult, as a practical matter, to trace back the initial causes of the going price-wage spiral, which is essential for the distinction between cost push and demand pull. One possible way of avoiding a vicious circle of reasoning is to examine the structure of particular markets and the likelihood of cost push and then to watch price or wage behaviour in the markets. Unfortunately our arguments are often based on ambiguous or treacherous factual grounds and differences of opinion between disputants often arise from there. We need, therefore, more facts to elaborate a more precise theory of inflation and anti-inflationary policy measures. With this in mind we may be able to proceed further by taking into account the British experience of operating an incomes policy. From this we may be able to throw more light on Japanese difficulties. In particular, as an incomes

policy must be related to the facts of the labour market, we must consider whether the structure of the Japanese labour markets and wage-fixing mechanisms, as compared with those of Britain, have a propensity to bring about a cost-push inflation, which would necessitate an incomes policy (or in this context, more exactly, a national wage policy). Related to this is the question of whether an incomes policy based on "voluntarism" would be workable under the present institutional framework in Japan and whether the operation of the Japanese labour market are appropriate to an effective utilisation of labour.

CHAPTER 2.

GENERAL ECONOMIC ENVIRONMENT OF CREEPING INFLATION

Before we proceed to tackle the questions raised at the end of the preceding chapter, it may be helpful to look over some basic facts surrounding the wage-price issues in Britain and Japan. Some of the most striking facts are that Britain is a mature industrial country (her economy was already highly industrialised by the beginning of this century - in 1911 her agricultural population was only 8 per cent of the whole (1)), while the Japanese economy with a relatively large proportion of agricultural population (17.5 per cent of total occupied population in 1969 (2)) is still in the process of industrialisation. Partly on this account, the Japanese economy has been growing at quite a high rate in contrast with the slow growth of the British economy. Thirdly, Britain has notoriously been in balance of payments difficulties under the burden of supporting the value of the pound sterling as an international key currency since the Second World War, while the Japanese balance of payments has been increasingly favourable in recent years and is expected to remain so

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(1) Source: W.H.B. Court, A Concise Economic History of Britain, 1750 to recent times (1954), p. 206.

(2) Source: Statistical Abstract of Japan (1969).

in the near future (1). These differences have had a great influence on the choice and the order of priority of economic policies in both countries. For example, the British government, obsessed with recurrent balance of payments crises, has been obliged to sacrifice other economic objectives to the more imperative task of redressing them, whereas the Japanese government has been preoccupied with the promotion of economic growth and, more recently, with the strengthening of the competitive standing of Japanese export industry in the world market, as pressure from abroad for the liberalisation of trade and capital transactions has increased. In consequence other national objectives have been sacrificed.

1. National Expenditure and Money Supply

Now we look at some factors which may be contributory to inflation. During the last decade the annual final expenditure on gross domestic product in real terms increased by 37 per cent in the United Kingdom and by 189 per cent in Japan. It is gross domestic capital formation that registered the highest rate of increase in both countries. But in the U.K. the impact of an increase in the expenditure

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(1) Balance of Payments

	U.K. (£ million):			Japan (US ∯ million):		
	Visible balance	Current balance	Overall balance	Visible balance	Current balance	Overall balance
1964	-519	-395	-684	+ 377	- 480	- 129
1965	-237	- 77	-385	+ 1,981	+ 932	+ 405
1966	- 73	+ 43	-521	+ 2,275	+ 1,254	+ 337
1967	-552	-312	-707	+ 1,160	- 190	- 571
1968	-643	-319	-1,078	+ 2,529	+ 1,048	+ 1,102
1969	-141	+416	+464	+ 3,699	+ 2,119	+ 2,283

Source: Monthly Digest of Statistics and Bank of Japan Economic Statistics Monthly.

of this category on total expenditure has been moderate because it accounts for a relatively small part of the latter. More than half of the increases in total expenditure registered during the period are

Table 2 - 1

Percentage Increases in Final Expenditure (revalued at 1963 prices) on Gross Domestic Product over the Period 1959 - 1969

	U.K.	Japan
Total final expenditure	37 (3.2)	189 (11.2)
Consumer's expenditure	28 (2.5)	158 (10.0)
Government current expenditure	47 (3.9)	150 (9.6)
Gross domestic capital formation	66 (5.2)	276 (14.2)
Exports of goods and services	35 (3.1)	162 (10.1)

Table 2 - 2

Share as Percentage of Total Final Expenditure

	United Kingdom		Japan	
	1957/59	1967/69	1957/59	1967/69
Total final expenditure	100.0	100.0	100.0	100.0
Consumer's expenditure	55.8	52.9	51.9	46.3
Government current expenditure	13.4	14.4	8.9	6.8
Gross domestic capital formation	13.5	16.3	27.8	36.1
Exports of goods and services	17.3	17.1	11.9	10.8

Note:- 1. Figures in ( ) represent average annual rates (geometric averages).
2. In order to weaken the effects of annual fluctuations caused by the short-term trade cycles, we derived figures for each category of expenditure by multiplying its share averaged over three years' period by total final expenditure in 1959 and 1969 respectively.
3. Japan's figures are for fiscal years and final expenditure on gross domestic product is calculated according to the following formula: Final expenditure on GDP = GNP + Imports of goods and services and factor income paid abroad.

Source: National Institute Economic Review and the Economic Planning Agency.

accounted for by increases in consumer's expenditure and the rest is ascribed to increases in government expenditure, domestic capital formation and exports roughly by one third each. In Japan capital formation, whose share in total expenditure was already remarkably large in 1959, continued to increase rapidly over 1959-69. Consumer's expenditure and domestic capital formation account for more than 80 per cent of the increases in total final expenditure registered during the period. Government expenditure and exports have played a relatively less important part in Japan than in Britain.

The decreasing share of consumer's expenditure and the increasing share of domestic capital formation are partly the reflection of the increasing personal savings ratios in both countries. In other words, the average household's propensity to consume has been on the decrease over time. The difference between the two countries in the rates of investment and economic growth is partly ascribed to the difference in the propensity to consume, i.e. Japan's savings ratio has been far greater than that of Britain over time.

Table 2 - 3

Personal Savings as Percentage of Personal Disposable Income

	U.K.	Japan
1959	5.0	15.1
1969	7.7	20.2

Source: Monthly Digest of Statistics and Bank of Japan Economic Statistics Monthly.

Although a rise in the level of total expenditure may have some impact on the general level of prices, changes in its composition

are also important in relation to the composition of the nation's productive capacity. The impact on the price level of an increase in one constituent of total expenditure may differ from the impact of another, depending whether the increase comes from the consumption side, the investment side, or the exports side. An increase in consumer's expenditure will have an immediate impact on the consumer goods market, while a rise in investment will primarily increase immediate demand for capital goods but contribute to the increase of productive capacity later, so that the long-run effects on the price level will differ between the two constituents of total expenditure. In this sense a high level of expenditure on domestic capital formation, as in Japan, can be a disinflationary factor in the long run, whereas an economy with high employment and a low level of domestic investment, like Britain, is liable to incur inflation, other things being equal.

The role of the money supply in the inflationary process, which tended to be neglected by Keynesian economists, has been highlighted again since the 1950's but there is still too much unknown about it. It seems certain, all the same, that the money supply has something to do with the price level (1). For instance, as shown in the table overpage, the amount of money supply has increased much faster than the national output in both Britain and Japan. Among other things, Japan's rate of increase of money

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(1) The correlation coefficient between the index numbers of money supply and consumer prices over 1956-69 is 0.9922 for the U.K. and 0.9940 for Japan (See Appendix IV).

Table 2 - 4

The Increase of Real Gross Domestic (or National) Product, Money Supply, and Consumer Prices, as on Index, 1956 = 100, and Changes in Bank Rate over 1956 - 69.

	United Kingdom:				Japan:			
	Real GDP	Money supply	Consumer prices	Bank rate	Real GNP	Money supply	Consumer prices	Bank rate
1956	100	100	100	5.50	100	100	100	7.30
1960	110	115	108	5.00	147	164	107	6.94
1961	114	118	112	6.00	166	194	112	7.30
1962	115	122	117	4.50	175	226	120	6.57
1963	120	131	119	4.00	197	304	129	5.84
1964	127	138	123	7.00	218	344	134	6.57
1965	130	148	129	6.00	230	401	143	5.48
1966	132	154	134	7.00	256	462	150	5.48
1967	135	171	137	8.00	290	539	156	5.84
1968	138	183	144	7.00	330	600	165	6.21
1969	140	188	151	8.00	372	724	173	6.21

Source: Annual Abstract of Statistics and Bank of Japan Economic Statistics Monthly.

supply in the 1960's is tremendous, as compared with that of Britain, even if we allow for the former's rapid economic growth. The nominal growth rate of GDP (or GNP) has exceeded the rate of increase of money supply in Britain and vice versa in Japan, which seems to be the results of a tight-money policy in the former and a loose monetary policy of the Japanese authorities in the past. This view is supported by another evidence, namely, movements of bank rates in both countries. The bank rate of Britain has been going up since the close of the 1950's, whereas Japan's bank rate has tended to drift downwards, despite inflationary trends in consumer prices, with the amelioration of her balance of payments since the middle of the 1950's.

The rapid increase of money supply has not been irrelevant to the remarkable increase of domestic capital formation in Japan. Her economy has always been short of capital and abundant in labour since her industrialisation started towards the close of the 19th century. Most of her required funds for industrial investment have been raised from domestic sources. What have made it possible are the high propensity of the Japanese household to save and forced saving through taxation and an inflationary monetary and fiscal policies. As for the latter, the monetary authorities, with an overt or tacit consent of the government, have supplied as much money as possible within the limits of her balance of payments, to finance investment for the technologically advanced sector of the economy, by keeping down bank rate (well below the market rates which would be high because of capital shortages) and allowing banks to overdraw from the central bank (1). Thanks to this expansionist monetary policy, Japanese banks have been ready to lend money to large enterprises : As shown in Table 2 - 5, their ratio of advances to total deposits have been well over 90 per cent, while that of British banks have been somewhere round 50 per cent. To put it another way, Japanese firms are more ready to borrow from banks than the British counterparts. In order to obtain investment funds, the former look to banks rather than the securities market.

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(1) The ratio of their borrowings from the Bank of Japan to total of their deposits and issued capital was about 20 per cent in 1961 (Source: S. Sashara, "Infure ni Hoshisuru Kinyu", Ekonomisto (op. cit.), p. 68.).

Table 2 - 5

Bank Advances and Investment as Percentage of Total Deposits

	U.K. (London clearing banks): Advances and other accounts	Investment	Japan (all banks): Advances	Investment
1963	48.7	15.6	93.0	1.5
1964	50.6	14.3	94.5	1.7
1965	51.8	12.1	93.2	1.9
1966	50.5	12.1	93.0	2.0
1967	48.3	13.7	95.0	2.0
1968	48.6	13.2		
1969	50.2	11.3		

Source: Monthly Digest of Statistics and Bank of Japan Economic Statistics Monthly.

In the United Kingdom about 28 per cent of total industrial investment funds came from the capital market (net capital issues) in 1969, while in Japan the proportion was only 8 per cent 1967 (1). The self-financing ratios of Japanese firms were between 20 and 30 per cent during the 1960's (2), which were well below those of average British firms. As a result, the burden of interest payments is very heavy indeed, for Japanese firms, so that they may be rather happy with mild inflation which steadily alleviates part of their burden. This is reflected in the attitudes of industrialists towards the problem of rising prices.

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(1) The British figure is derived by dividing the net capital issues by quoted public companies in the U.K. by the addition of the same net capital issues and the increase of bank advances less personal loans over the previous year.

(2) S. Sasahara, op. cit.

In addition to the level of money stock and its rate of increase, we have to consider whether the investment funds are channelled in the right direction so as to eliminate bottlenecks in production. In Japan, although some people resent agriculture and small-scale industry being slow to improve their productivity and putting up their prices in compensation for increases in wage cost, the question to be asked in this context is whether enough investment funds have so far been supplied to these retarded sectors so as to enable them to equip themselves with modern labour-saving technology. As shown in Table 2-6 below, there are some remarkable differences between Britain and Japan in the composition of money supply. For example, bank advances to overseas

Table 2 - 6

Analysis of Bank Advances by Industry
(Amounts outstanding at the date specified below)

	Britain: as of May, 1970	Japan: as of March, 1970
Total	100.0	100.0(33*)
Manufacturing industries	29.2	44.4(27*)
Agriculture, forestry and fishing	4.2	1.1
Mining and quarrying	0.8	0.7
Construction	3.8	4.7
Retail	3.1	5.2
Other distributions	3.9	24.2
Financial institutions	5.1	1.2
Property companies	2.8	3.5
Transport and communication	1.8	3.9
Public utilities & national government	0.7	1.3
Local government	0.6	1.0
Services	5.1	4.4
Personal	7.8(3.2**)	3.0
Overseas residents	33.6	-

Note:- 1. The figures with * are the shares devoted to medium and small-sized firms (with a capital of 50 million yen or less) in the total amount outstanding of all industries and services, and of manufacturing industry alone respectively.
2. The figure with ** is the share devoted to house purchase in the total amount outstanding of all industries and services.

Source: Bank of England and Bank of Japan.

residents are the most important single item on the British banks' accounts, while they are negligible in Japan. Instead, nearly half of the bank advances have gone to manufacturing industry and one third, to the distributive trades in Japan. The amount of bank advances devoted to manufacturing industry and distributive trades are nearly one third and less than one tenth of the whole respectively in Britain. Another characteristic of the British structure of bank advances, as compared with the Japanese counterpart, is no meager proportion of advances devoted to personal loans for consumption purposes, like house or car purchase. The share of bank advances for Japanese agriculture is much smaller than that for British agriculture, despite a much greater importance of agriculture in Japan. Japanese small manufacturing firms, which represent 98 per cent of all manufacturing firms in terms of number and produce more than half of the industry's total output (1), have been supplied with only 27 per cent of total bank advances devoted to the industry.

2. Industrial Concentration

There are differences of opinion among economists about the importance of monopolistic power and its impact on prices in Japan. The nature of the problem defies any simple solution, as there is no satisfactory indicator which shows the effect of market power and its performance in the market. For example, industrial concentration measures only a single aspect of the market structure

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(1) Source: Ministry of Industry and International Trade.

at best. A high concentration ratio does not necessarily demonstrate monopolistic behaviour in the market concerned. In an industry with a highly oligopolistic market structure where a few big firms dominate the market, there may yet be fierce rivalry between them. On the other hand, in an industry where there are a relatively large number of firms none of which is dominant, competition between them may be very limited or suppressed through some kind of collusion, like cartels, or through customary restrictive practices. Allowing for these and other limitations attached to industrial concentration as a measure of market power (1), we shall give a preliminary appraisal of the market structures of Britain and Japan, though relevant statistical data available are scarce and fragmentary so that the result is not expected to be very conclusive. Moreoever, a detailed and refined analysis of this kind is almost impossible at this stage, because the coverage of industries by statistical data available at present is far from exhaustive and the industry classifications differ considerably between the two countries.

The following analysis is mainly based on the table in Appendix I. If we take a cursory glance through this table, we find that on the whole the general level of industrial concentration is apparently higher in Japan than in Britain, though the British industry classifications often contain a more heterogeneous collection of products so that it is quite likely that high concentration ratios of some products in a given industry group are offset by low ratios of others and consequently that the ratio for the group as a whole becomes

(1) See A. Hunter, "The Measurement of Monopoly Power", Monopoly and Competition (1969), pp. 92-96.

moderate (1). The relationship holds true between Japan and the United States. According to a study on industrial concentration in these two countries (2), out of the 95 commodity groups covered by the study, those which have a market concentration above 70 per cent as defined in terms of the share held by the four largest firms in the industry's output are 35 in Japan and 27 in the United States. If we pick industries with a concentration ratio of 50 per cent or more in both countries, there are 47 such industries in Japan, as compared with 24 in the United States. Since it is a general impression that the problem of monopoly and administered prices are more serious in Britain and the United States, it is a little surprising at first sight but no wonder if we look into the situation more closely. Probably the market concentration ratio itself does not convey much information about monopoly because it 'does not directly reflect the character of competition or the likelihood of collusion within the industry' (3). Generally speaking, the market concentration ratio is higher in those industries where the use of large-scale capital-intensive technology is indispensible, or which are 'new' in the sense that their products have recently been either developed for market purposes at home or introduced from abroad. Particularly where the methods of production used in the industry concerned are protected by patent rights or highly sophisticated, the ratio may be very high. Many new chemicals like polyesters, polypropylene, etc. fall under this category. One of the reasons for the generally high level of concentration in Japan is that many products of the heavy and chemical industries are

(1) See M.A. Utton, Industrial Concentration (1970), p. 81.
(2) Fair Trade Commission (Japan), Nihon no Sangyo-shuchu (1969), pp. 296-8.
(3) A. Hunter, op. cit., p. 108.

relatively new - introduced from abroad or developed at home after the Second World War - and require large-scale capital-intensive plants or use production methods introduced under the contract with foreign patentees. Another important factor bearing on the level of concentration is the size of the market relative to the scale of technology economically available. In a country where the size of the economy (and therefore that of the domestic market) is small, like Australia, the degree of concentration is generally greater (1). The difference in the general level of concentration between the United States and Japan may be partly accounted for in this context. Needless to say, the size of the market for particular goods is not always equivalent to that of the national economy. The markets for some commodities are extremely localised, like building construction and laundry work, or limited to particular consumers, like railway carriages or locomotives, because of the nature of the commodities without much regard to the absolute size of the national economy. Milk products, except fresh milk, and whisky are highly concentrated in Japan but not so in Britain and the United States, which is mainly due to the difference in the size of the markets for those products (for which demand is relatively limited in Japan) rather than the difference in technology used in the countries concerned.

Economic growth may work on the level of industrial concentration in a particular industry in two opposite ways. First, the rise of the aggregate demand level concurring with economic growth may generally expand the size of the existing markets, which

(1) A. Hunter, op. cit., p. 120.

will facilitate the entry of new firms or stimulate the competition among the existing firms to increase their share in the market and result in a lower level of concentration. Secondly, however, shifts in the demand structure incidental to the rise of the per-capita income level may expand the markets for some new products but contract the markets for old products. In this case firms, faced with a contracting market for their products, tend to turn to collective curbs on production through collusion or try to maintain their present share - which is threatened with shrinkage - by merging weaker firms in the same industry. The result may be a higher level of concentration. The diversification of products, resulting from increasing specialisation, may slice the existing market through the invasion of new products unless aggregate demand expands rapidly enough. A higher level of concentration may ensue from it for each product, either old or new. The complicated interplay of these factors makes the future trends in the general level of industrial concentration difficult to predict. It appears that in Britain market concentration has increased since the beginning of the 1950's, (1) while in Japan it decreased until the close of the 1950's but increased slightly thereafter (2). As for the trends in the concentration ratios of individual industries, with all the differences in detail, some common characteristics are observable in both Britain and Japan. High concentration ratios are found in both countries among such industries

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(1) M.A. Utton, op. cit., pp. 94-5.

(2) Fair Trade Commission, op. cit., pp. 57 - 67.

as chemicals, engineering, vehicles, watches, glass, cement, metal manufacture, etc. An interesting fact is that in the older manufacturing industries like textiles and food-processing, market concentration appears to be on the increase after the war in the two countries (1). However, these industries include very heterogeneous sub-industry groups within themselves: On the one hand, the markets for traditional goods like natural fibres, clothing, bread, soya-sauce, sake, and the like have been competitive for a long time but in face of contracting demand for them, market concentration has tended to rise in recent years; on the other, there are relatively new goods like synthetic fibres, margarine, chocolate, etc., which are rather highly concentrated.

On the whole the general tendency of concentration in a particular industry is supposed to be such that at the early stages of its development the industry's concentration is high because of a limited number of initiative enterprises; then, as demand for the industry's products expands, new firms enter the industry, which results in intensified competition among firms for a larger market share and probably in a fall in the concentration level; and finally, the market for the products is saturated and demand for them becomes stagnant or often declines because of the advent of new substitutes, which results in the elimination of less efficient firms and the

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(1) See M.A. Utton, op. cit., p. 94, and Fair Trade Commission, op. cit.

increase of concentration in more efficient firms. It is believed that many Japanese industries have so far been at stages from the first to the second and further to the third in some cases, while a considerable number of British industries seem to be at or near the third stage as defined above, for there is no industry whose output decreased during the 1960's in Japan but the production of some British industries actually shrunk (1).

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(1) See Appendix II (Index numbers of industrial production).

CHAPTER 3.

RECENT TRENDS IN PRICES

1. Consumer Prices

It was in the 1950's that both British and Japanese economies began to break with remains of wartime or post-war emergency controls and return to normalcy, and that the galloping inflation caused by explosive demand immediately after the Second World War and during the Korean War was thought to have changed into a creeping inflation, which is still going on today. As shown in Table 3-1, the pace of price increase slowed down in the latter half of the 1950's in both countries. By this period consumer prices in Britain had already lost downward flexibility, which those in Japan still retained (consumer prices actually dropped, as shown in Figure 3-1, in the years 1955 and 1958 in Japan). On entering the 1960's, the rate of price inflation again accelerated, particularly in Japan, and downward rigidities in price movements became apparent in Japan as well.

Table 3 - 1

Average Annual Rates of Change in Consumer Prices over Period:

	Britain	Japan
	%	%
1952-54	4.7	6.0
1955-59	3.3	0.6
1960-64	2.8	5.4
1965-69	4.2	5.4

Source: UN Statistical Yearbook

Although the annual rate of price inflation showed great variation in Japan, the basic trend in the price movements of both countries was strikingly similar, as Figure 3-1 demonstrates (1). As regards factors having contributed to the increase of the

(1) The correlation coefficient between the movements in consumer prices of both countries is 0.4566 (See Appendix V).

Figure 3 - 1

Rate of change

Percentage changes in consumer prices over the previous year

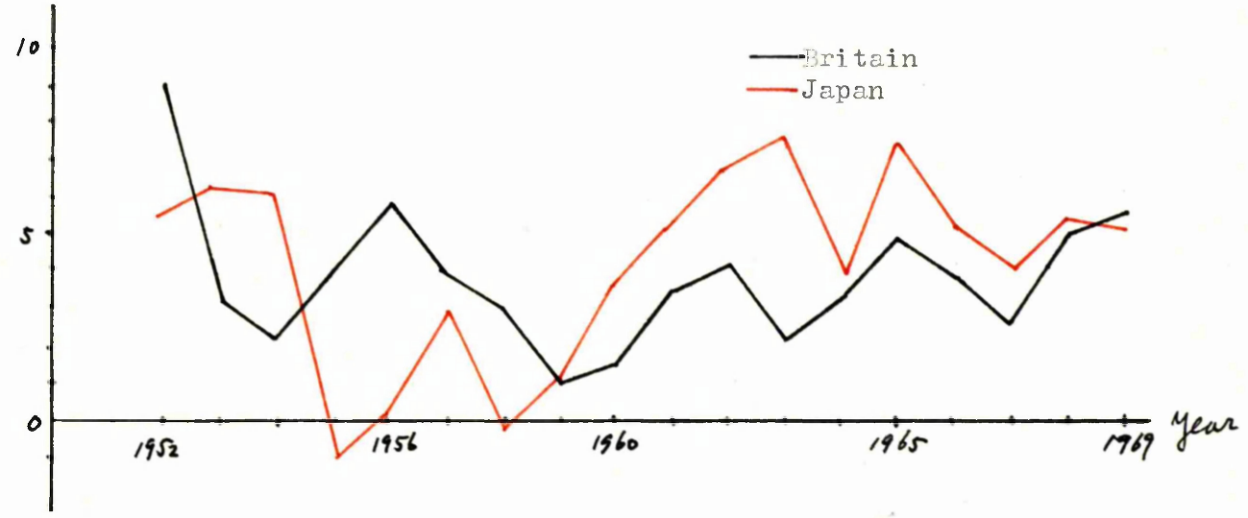
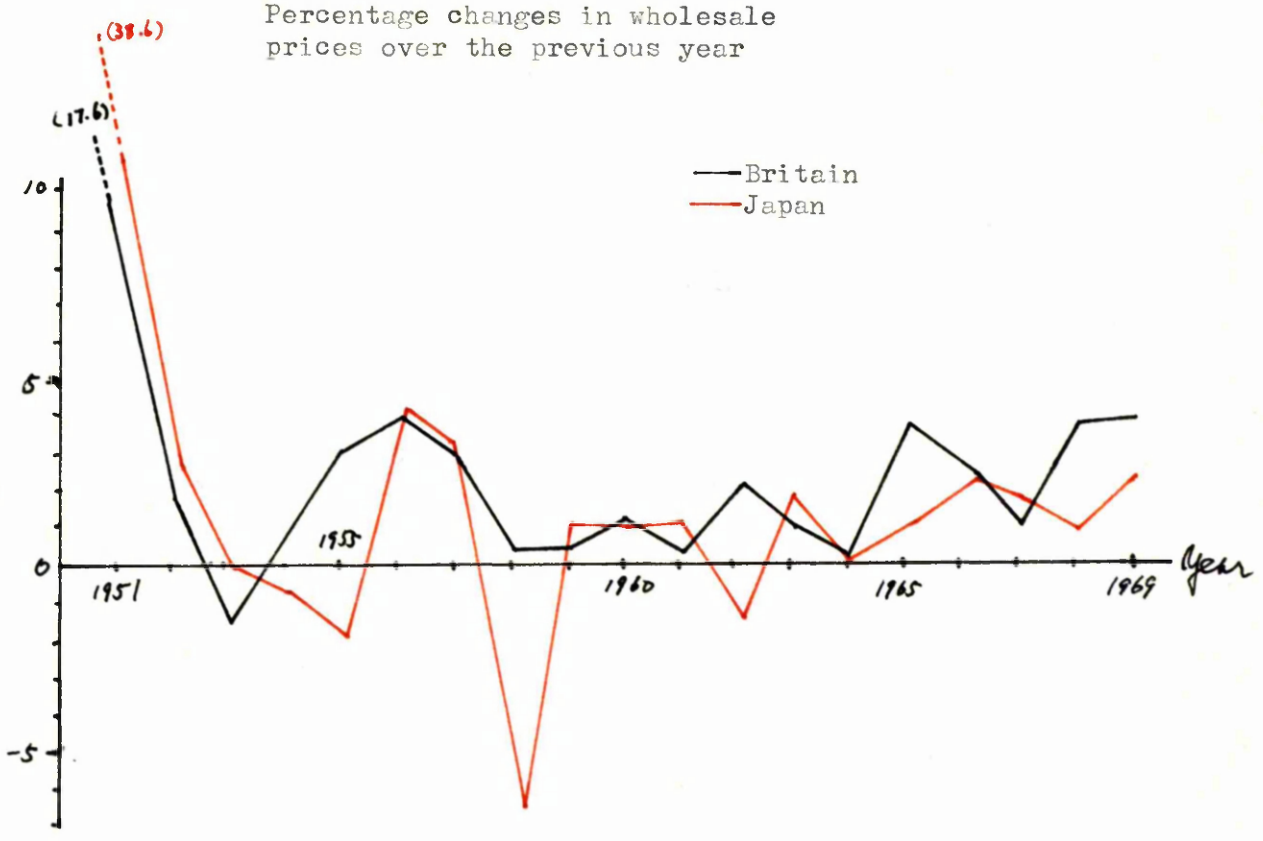


Figure 3 - 2

Percentage changes in wholesale prices over the previous year



Source: See Appendix V.

consumer price level, there are similarities and differences between the two countries: Housing, services and miscellaneous goods registered a high rate of price increase over 1958-68 in both countries; in Japan, food prices rose most rapidly and contributed most to the rise of the consumer price level, while the rate of increase in these prices was lower than the average in Britain; the prices of fuel and light soared in Britain but remained fairly stable in Japan (1).

2. Wholesale Prices

The wholesale price level regained more stability, like the consumer price level, in the 1950's except the first two years when the aftermath of the "backlog" inflation (following the end of the Second World War and reinforced by the Korean War) was still felt. (2) The average annual rate of increase in wholesale prices over the five years' period beginning in 1949 (when the pound sterling was devalued) was very high, as compared with those in other periods, in both countries.

Table 3 - 2

Average Annual Rates of Change in Wholesale Prices over Period

Years	United Kingdom: Basic materials	United Kingdom: Finished goods	Japan: All items
1949-54	7.0 %	4.6 %	13.5 %
1954-59	0.8	2.4	0.0
1959-64	1.0	2.3	0.4
1964-69	3.3	3.2	1.7

Source: UN Statistical Yearbook.

As shown in Figure 3-2, this is mainly due to extremely large price increases before 1952. In the following decade the wholesale price level, except for manufactured goods in the U.K.,

(1) For further analysis, see Appendix III.

(2) Taking 1939 as a base year (1939 = 100), the index of British wholesale prices in 1950 was 289 for basic materials and 164 for finished goods, while that of Japan was 17,500 (Source: UN Yearbook).

remained relatively stable. Although its average annual rate of increase was higher in the latter half of the 1960's than in the preceding decade, the pattern was not broken until the very end of the 1960's.

The wholesale price level has displayed far more downward flexibility than the consumer price level in both countries. Yet it seems that in the second half of the 1960's the wholesale price level has also tended to become less flexible downwards, a development which was already apparent for British manufactured goods in the 1950's. Wholesale prices of manufactured goods in Britain have been particularly responsive to previous fluctuations in the prices of basic materials (1) and the movements in consumer prices were also related, though less apparent, to those in wholesale prices of finished goods there (2). In Japan movements in consumer prices which showed a higher rate of increase in the 1960's were not accompanied by corresponding movements in the wholesale price level which was more stable than in Britain (3). Thus discrepancies between the movements of wholesale and consumer prices in Japan were very much greater than in Britain during the 1960's.

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(1) The correlation coefficient between movements in wholesale prices of finished goods and those of basic materials one year earlier is 0.8044 (See Appendix V).

(2) The coefficient of correlation between the rates of change in consumer prices and wholesale prices (of finished goods) over 1952-69 is 0.5227 (See Appendix V).

(3) The correlation coefficient between the rates of change in consumer prices and wholesale prices over 1951-69 in Japan is 0.2785 (See Appendix V).

The most prominent feature of the wholesale prices for manufactured goods in Britain is that since the middle of the 1950's the prices of steel, machinery, fuel, and chemicals - in short, products of the modern key industries - have continuously risen, while the prices of these products in Japan have remained fairly stable or even fallen. In Japan, although the wholesale prices as a whole have been relatively stable, the prices of processed food, non-manufactures (farm products, etc.) and sundry goods manufactured by small industries have increased considerably fast. Since these products are mainly consumer goods, increases in their prices tend to push up consumer prices directly, unless there are large productivity improvements in distributive trades (which is not likely in practice). On the whole, one of the main reasons why the British wholesale price level rose faster is that those prices of products of the modern key industries which should be lowered because of great possibilities for productivity improvements (if price stability is to be maintained) actually increased, while in Japan falls in some of these prices were offset by rises in the prices of products of the backward sector, which resulted in a relative stability of the wholesale price level. (1)

3. Import and Export Prices

British export prices have had a steady upward trend since the beginning of the 1960's, in contrast with the relative stability of the Japanese export prices, which were lower in 1969

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(1) For further analysis, see Appendix III.

Figure 3 - 3

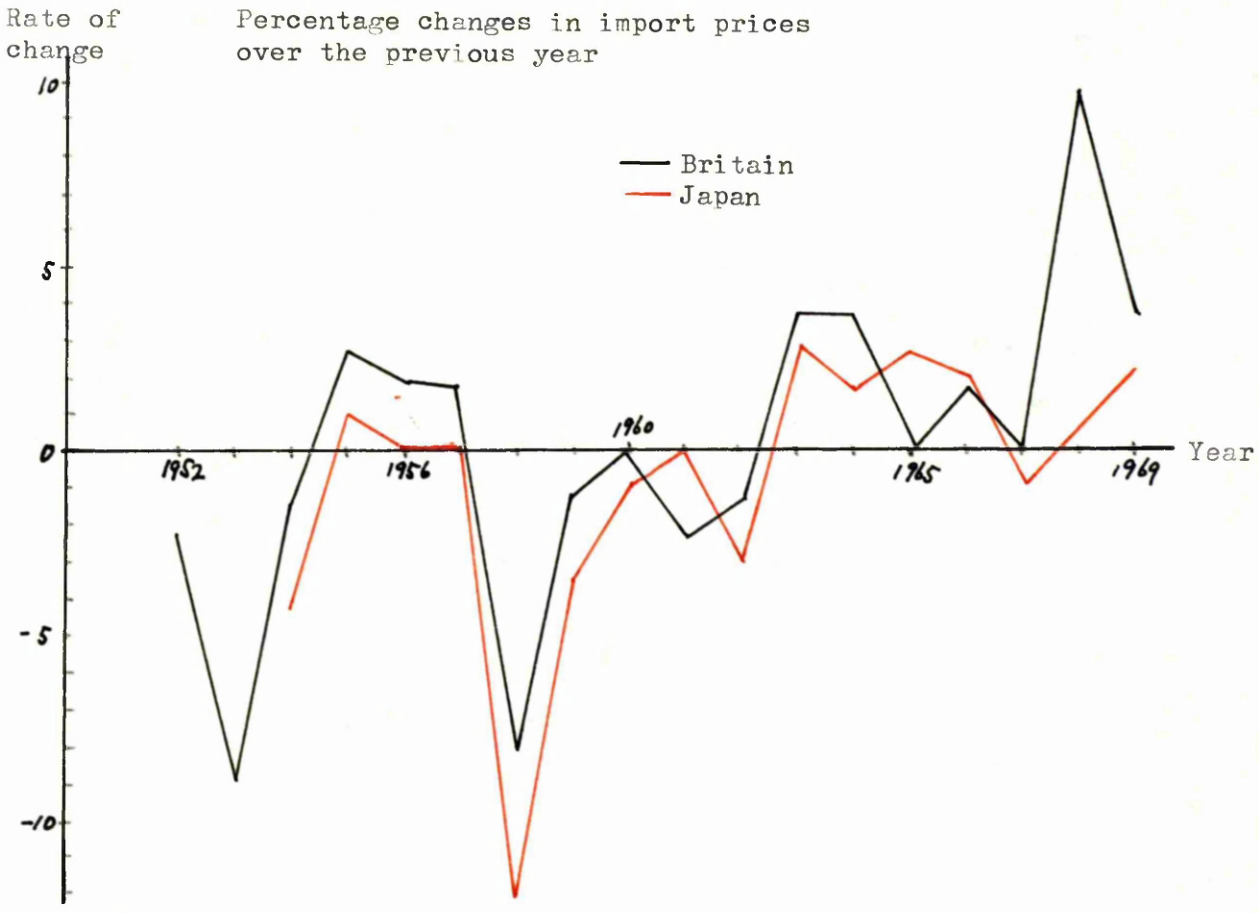
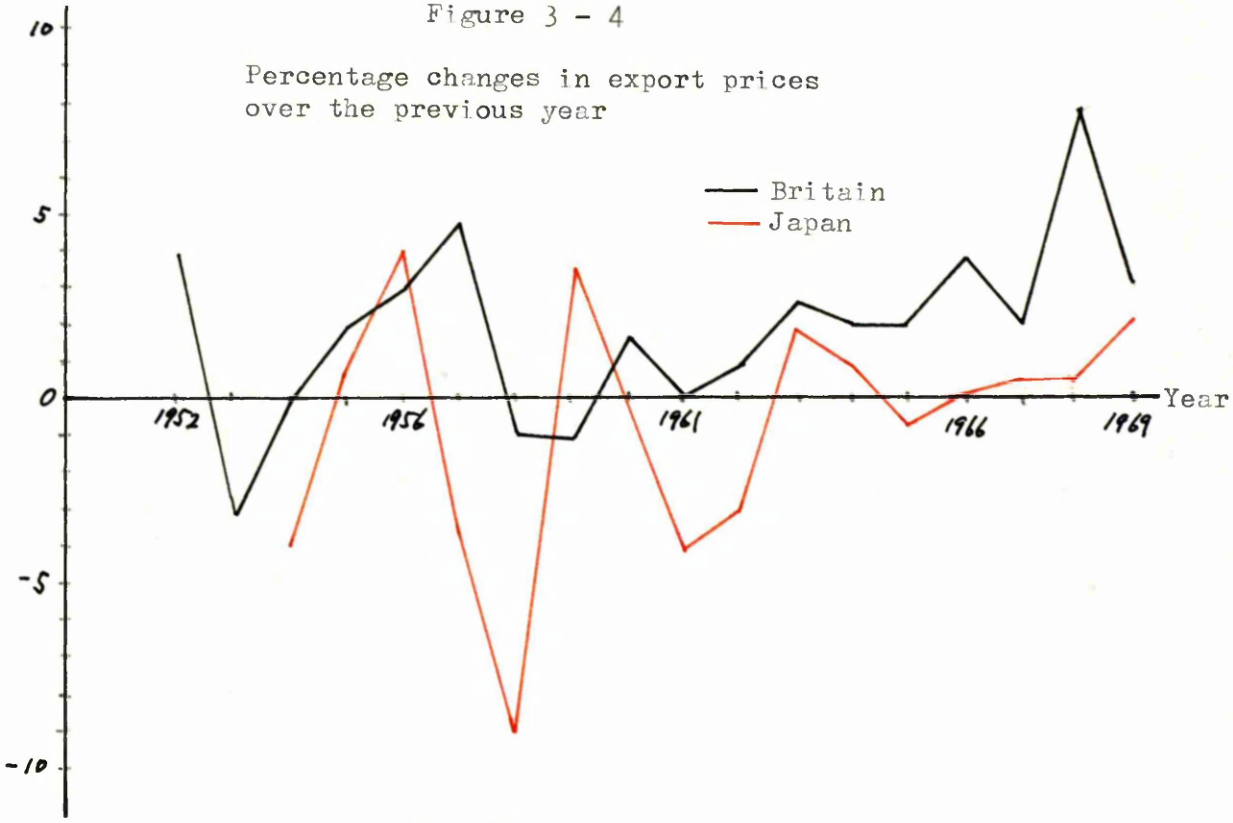


Figure 3 - 4



Source: See Appendix V.

than at the beginning of the 1950's (Figure 3 - 4) (1). In both countries import prices fluctuated more greatly in the short run but remained more stable over the period, except for the early 1950's and the last two years (2): British import prices soared immediately after devaluation in 1949 and 1967. Japanese import prices were relatively stable and still much lower in 1969 than in the early 1950's. Taking into account the heavier dependence of the British economy on foreign trade (3), the increases in import prices must have had a greater unfavourable effect on the British domestic prices, which has in turn been likely to push up her export prices.

In Britain the import prices of manufactured goods and foodstuff, which constituted two thirds of her imports (in 1969), rose considerably fast, while in Japan the imports of those goods which showed large price increases, like machinery, metals, etc., were less important so that she did not suffer so much as Britain did from inflationary trends in the world market. As for movements in export prices, the prices of products of key manufacturing industries, like machinery, metals, chemicals, etc., which constituted nearly two thirds of total exports in both countries, rose to a considerable extent in Britain and

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(1) The export price level was 7 per cent lower in 1969 than in 1953 in Japan, while it was 25 per cent higher in 1967 (even before devaluation) than in 1953 in Britain (Source: National Institute Economic Review and Bank of Japan Economic Statistics Monthly).

(2) The import price level was 15 per cent lower in 1969 than in 1953 in Japan, while it soared in 1968 and 1969 after devaluation, though also 7 per cent lower in 1967 than in 1951, in Britain (Source: The same as in Footnote (1)).

(3) The ratio of the amount of foreign trade - exports plus imports of goods and services - to GNP in 1969 is nearly 50 per cent for the United Kingdom and about 18 per cent for Japan (Source: The same as above).

fell in Japan (1).

Although import and export prices seem to be more flexible than domestic consumer or wholesale prices in any country because of keener competition in the world market, a sign of downward flexibility appeared in the British export prices, while it was not yet certain in those of Japan in the 1960's. If we look at Figures 3-3 and 3-4, however, we find that there was a considerably close association between the British and the Japanese import prices over the period, except for the last two years, though the degree of association between the export prices of both countries was much lower, particularly in recent years. With all the differences, as might be expected from the above analysis, the underlying trends in the price movements of both countries may be similar. This is confirmed by correlation analysis: The coefficients of correlation between the rates of change in consumer prices (as referred to in Section 1) and between those in import prices and export prices, of the two countries over the period are 0.4566, 0.7037 and 0.3264 respectively (2). There are, therefore, supposed to be some underlying causes common to both British and Japanese economies. The similarity of the basic trends in prices of the two countries may be due to accident but it seems more reasonable to consider that they are linked with the conditions of the world market and similar shifts in the demand structure in the home market. As regards the export and import prices, Britain and Japan have common characteristics : They are (1) importers of basic materials and

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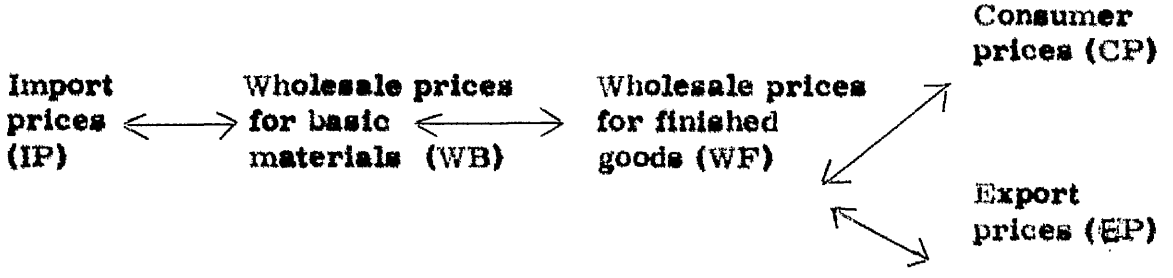
(1) For further analysis, see Appendix III.

(2) See Appendix V.

foodstuff (though less important for Japan) and (ii) exporters of manufactured goods. But, import prices are largely determined by the conditions ruling in the world markets and differences in the movements of the general level of import prices between the two countries may be ascribed to differences in the composition of imported goods and services and in the movements of their individual prices. Export prices will also be subjected to international competition but much more sharply influenced by demand conditions in the home market and the cost conditions of domestic industry.

Finally, to sum up the movements in the different price indexes in the two countries, we can show the relationships between them by a chain of relationships as follows:



This diagram shows that (i) the impact on other prices of cost push arising from either import or wholesale prices will be transmitted from left to right; and (ii) the impact on prices of excess demand arising from either the home or the export market will be transmitted from right to left, on the other hand. We have tested the degree of linkage of those relationships by correlation analysis. The results are in the following table, which shows the coefficients of correlation between the rates of change in price indexes of two different categories listed in the column and the row (for example, that between WF and EP is 0.7851). Generally speaking, the movements of all price

Table 3 - 3

Correlation between Different Price Indexes
over the Period 1952-69

U.K.:			Japan:	
	WB	WF		WB+WF
IP	0.9695	-	IP	0.7681
WF	0.8044	-	CP	0.2785
CP	-	0.5227	EP	0.7318
EP	-	0.7851		

Source: See Appendix V.

indexes are, as might be expected, positively more or less related to one another in both countries. The degree of linkage of the movements in different price indexes is very much higher for Britain than for Japan. This may imply that a large rise in import prices will hit other prices in Britain harder than in Japan. And, taking into account a strong correlation between the movements in import prices of both countries, their domestic inflations may be related to each other through price adjustments in the world market.

CHAPTER 4.

RECENT TRENDS IN WAGES

1. Movements in the General Level of Money Wages

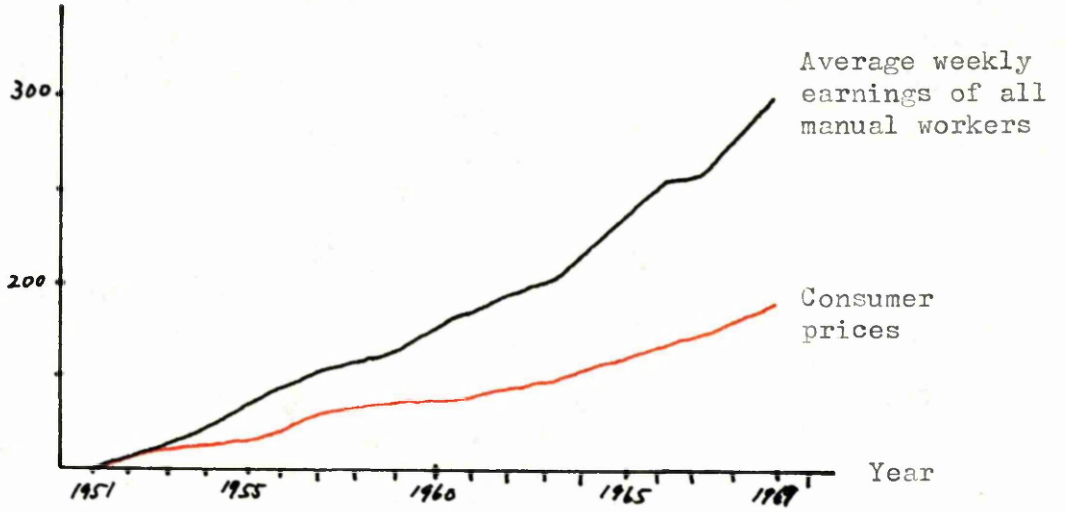
Since the Second World War the money wage level has been rising, continuously and much faster than the price level, in both Britain and Japan (1). 'The most obvious characteristic of money wages is that they rise over the long run. (...) There was little relation, however, between the rate of increase in money and real wages, either as between countries or between different time periods in the same country.' (2). As Figures 4-1 and 4-2 show, the pace of money wage increase differs considerably between Britain and Japan in the last two decades or so: The money wage level tripled in Britain and more than quadraupled in Japan, while the consumer price level approximately doubled in both countries. The Japanese rate of increase in money wages was generally higher than that of Britain throughout the period, except for 1955-8 (Table 4-1 and Figures 4-3 and 4-4). The British rate of increase in consumer prices was also higher during this short period, while it was generally lower than that of Japan in the 1960's,

(1) The most conspicuous feature of the movements in wages after the war is the sustained rise of wages in industrial countries. E.H. Phelps Brown pointed out that 'the average rate of rise is generally greater than that experienced before in all save rare years of high boom such as 1873 or 1919,' and that 'even more unprecedented than the rate of the rise is its persistence for as much as 15 years*: hitherto it had been rare for rises to continue for more than five years together.' (*from 1945 to 1960: a note by the present writer) (op. cit., pp. 291-3).

(2) L.G. Reynolds, op. cit., p. 413.(...) is abridged by the present writer.

Figure 4 - 1

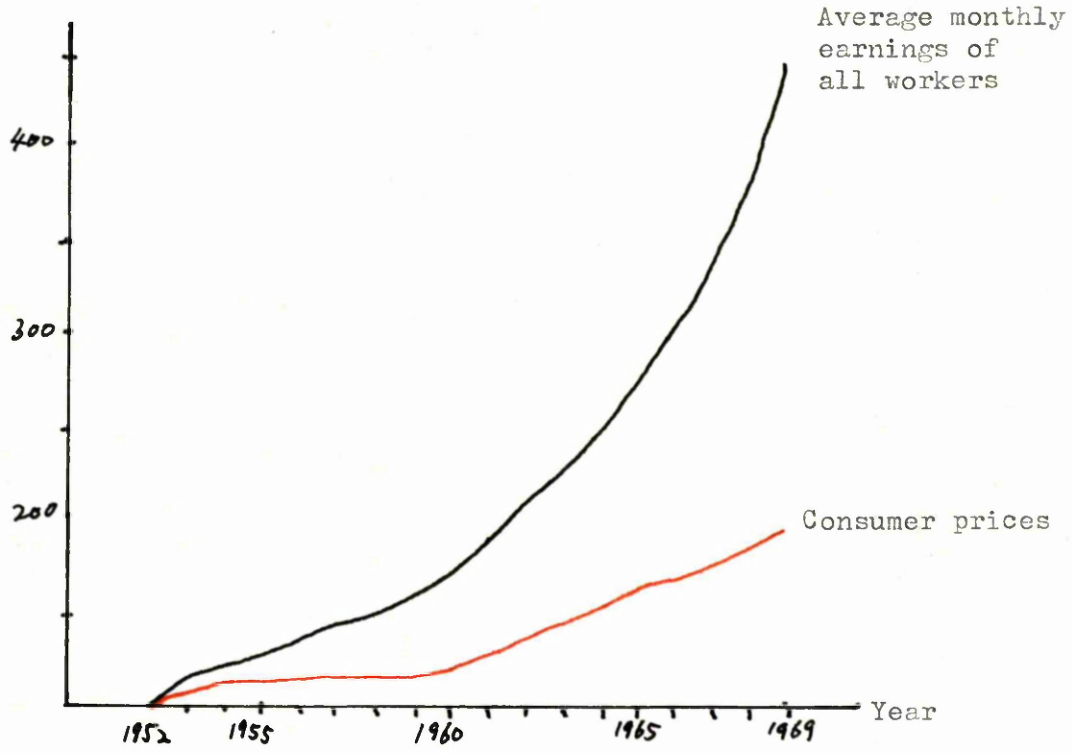
U.K. : Movements in earnings and prices, as on index, 1951 = 100



Source: UN Statistical Yearbook and Employment and Productivity Gazette.

Figure 4 - 2

Japan: Movements in earnings and prices, as on index, 1952 = 100



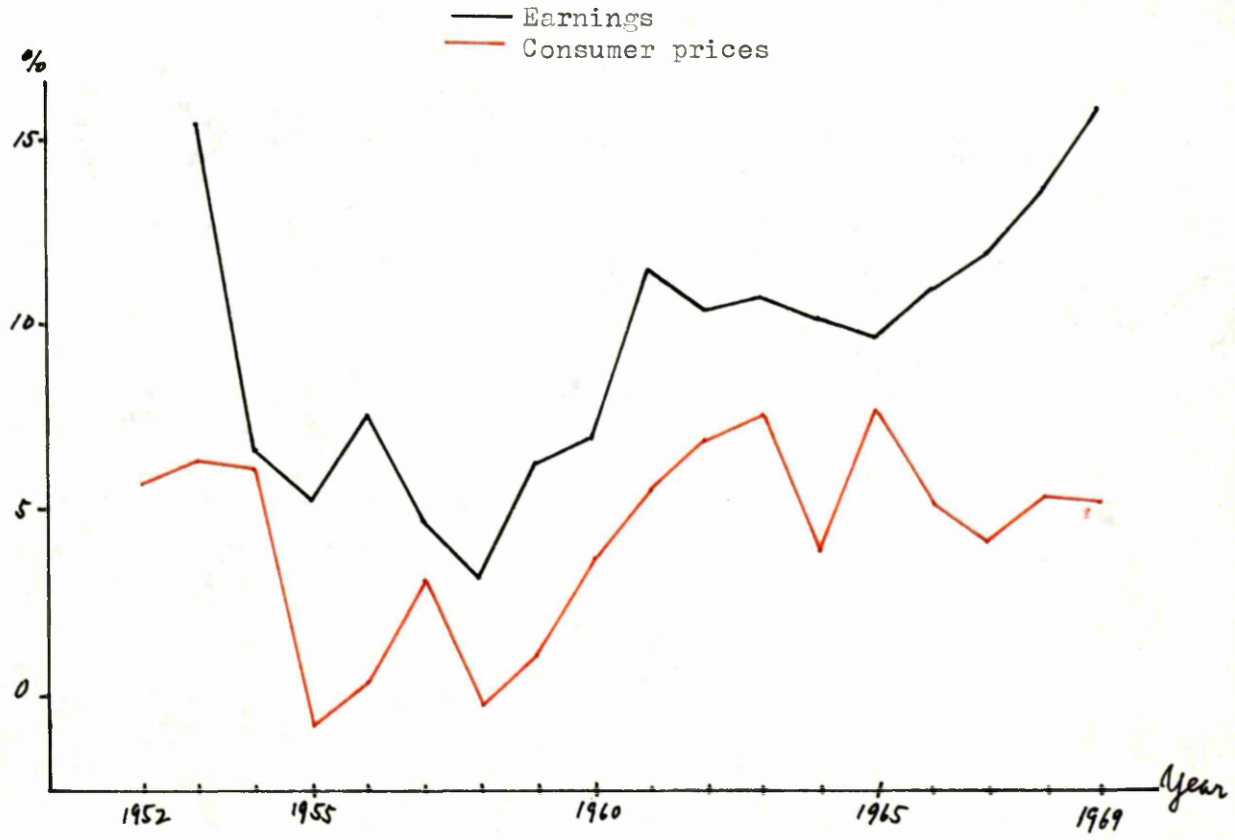
Source: UN Statistical Yearbook; Yearbook of Labour Statistics.

Figure 4 - 3

Percentage changes in earnings and consumer prices over the previous year in Britain

Figure 4 - 4

Percentage changes in earnings and consumer prices over the previous year in Japan



Source: See Appendice V, X, and XI.

as shown in Figure 3-1 of the preceding chapter. The real wage level more than doubled in Japan and rose one and a half times in Britain during the last two decades. It is impressive that the high rate of increase in money wages always exceeded the high rate of increase in

Table 4-1

Average Annual Rates of Increase in Wages and Consumer Prices over Period
(in percentages)

	U.K.: Wages (A)	Prices (B)	(A)/(B)	Japan: Wages (C)	Prices (D)	(C)/(D)
1951-64	6.9	4.7	1.5	10.9	6.0	1.8
1954-59	6.0	3.3	1.8	5.3	0.6	8.8
1959-64	5.8	2.8	2.1	9.8	5.4	1.8
1964-69	6.6	4.2	1.6	12.3	5.4	2.3

Note:- For explanations and source, see Appendix IV.

consumer prices and, therefore, the real wage level continuously rose throughout the period from 1952 to 1969 in Japan, whereas the real wage level ceased rising in those years when the increase in money wages decelerated, in Britain.

If we look, however, at the relation between the rates of increase in money wages and consumer prices in a longer term, things differ. There seems to be a loose relationship that the rate of increase in money wages is high, as shown in Figures 4-3 and 4-4, when that in consumer prices is also high or vice versa (1). Between

(1) The coefficients of correlation between the rates of change in wages and consumer prices over 1952-69 are 0.5133 for the U.K. and 0.6340 for Japan (See Appendix V).

1954 and 1960 the rises in both money wages and prices slowed down in Japan, as compared with the preceding and following years. So did they in Britain between 1956 and 1963. Interestingly enough, the real wage level rose more, during those periods when both rates of increase in money wages and consumer prices were low (i.e. 1954-59 and 1959-64 in Britain and 1954-59 in Japan), than during those periods when they were high (Table 4-1). The accelerated increases in money wages (in 1955, 1960-61, 1964, and 1968 in Britain; and in 1957, 1963, and 1965 in Japan) were followed by large rises in prices in the ensuring one or two years (i.e. 1956, 1962, 1965, and 1969 in Britain; and 1957, 1963, and 1965 in Japan). But in Japan, since 1966, the rise in money wages has steadily accelerated one year after another - a situation which can be genuinely termed a "wage explosion", while that in prices has remained fairly stable at a high level round 5 per cent annually. (1)

Incidentally, the "pay pause" by the Conservative government in 1961-62 and the "standstill" by the Labour government in 1966-67 left clear traces on the movements in British wages on the graph in Figure 4-3, and the same graph also shows that after these wage restraints were lifted, greater wage advances followed.

Lastly, two things to be added, which are relevant to later discussion, are (i) although the degree of correlation between the rates

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(1) As analysed more fully later, the large wage increases in this period, mainly induced by labour shortages, were absorbed by high productivity growth which was made possible by rapid capital formation in the past, so that their impact on the price level was relatively moderate.

of change in wages and wholesale prices was lower than that between wages and consumer prices in both countries, the movements in wages were more highly associated with those in wholesale prices in Japan than in Britain; (ii) while the rate of wage increase has already exceeded 10 per cent per annum since 1961 in Japan, the rate of productivity growth in manufacturing industry has also been high and far more strongly associated with the rate of wage increase in Japan than in Britain (1).

2. Wage Dispersion

The general wage level is sometimes misleading because it simply represents the average of the wages of all workers and takes no account of disparities among them. A high general wage level does not always mean that all workers equally receive high wages: Some of them may receive lower wages in a high-wage country, region, or industry than the average or even low-wage workers in a low-wage country, region, or industry; equally, a rise in the general wage level may be the result of an increase in the pay-packet of higher-wage workers, while low-wage workers receive the same wages as before. Although the wage level in Japan as well as other Western countries has soared since the Second World War, there seem to be many low-wage workers who have been left behind in wage advances.

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(1) The coefficients of correlation between the rates of change in wages and wholesale prices over 1952 (1954 for Japan) - 1969 are 0.3014 for Britain and 0.4650 for Japan (See Appendix V). The coefficients of correlation between the rates of increase in wages and productivity in manufacturing industry over 1950-60 are 0.2035 for Britain and 0.5895 for Japan (See Appendix XV).

while some high-wage workers may have further improved their position.

The distribution of wages among the workers is more or less positively skewed in most countries, that is to say, there is more upward than downward spead in wages among the workers. This is also the case in both Britain and Japan (Figure 4-5). Wage dispersion, particularly downward spread, is larger in Japan (1) than in Britain where 'there is less spread in earnings now than in 1906, but more of an upward spread in 1960 than in 1938' (2). Even if we limit ourselves to male workers in some manual trades, there are yet wide differencesin earnings between them and the distribution of their earnings is also positively skewed in both countries (Figure 4 - 6). While the pattern of upward spread is similar, the extent of downward spread is greater in Japan than in Britain. What are the causes of wage dispersion among the workers who were often supposed to be homogeneous and paid the same wages in classical economic theory? What are the causes of wider wage dispersion or more downward spread in Japan than in Britain? Is there any relationship between the degree of wage dispersion and the rate of increase in the wage level? In

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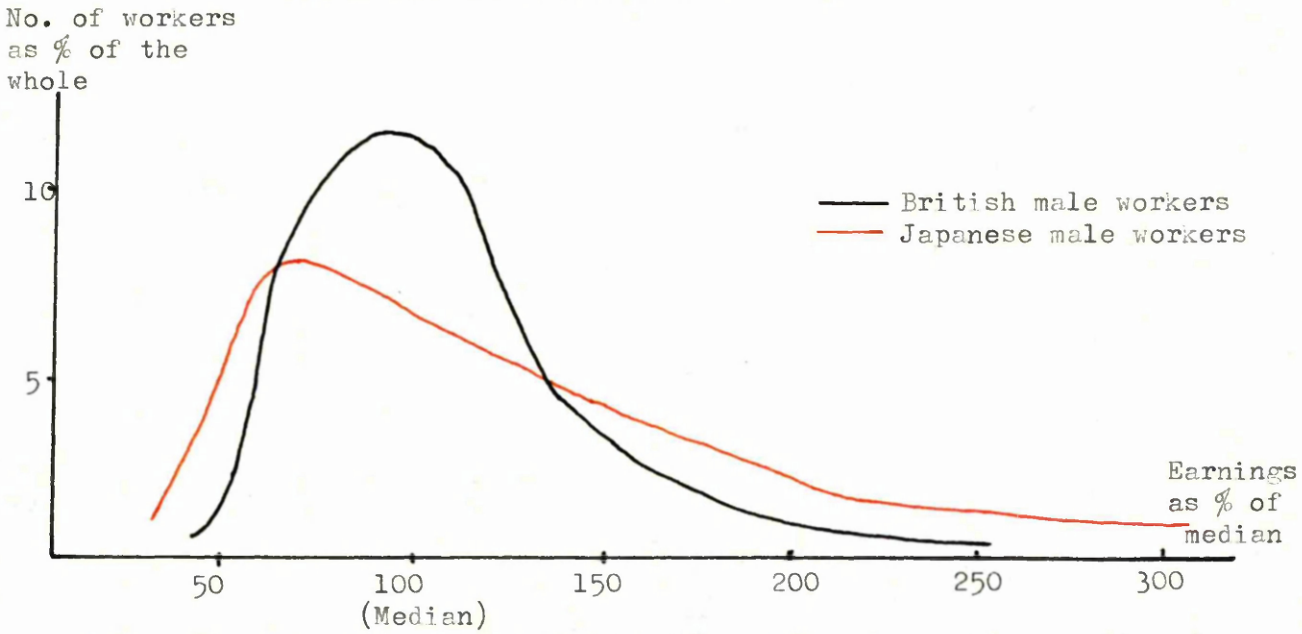
(1) One thing to be noted about Figure 4-5 is that the British data are for weekly earnings and the Japanese data are for annual earned income of employees. Dispersion in annual earnings tends to be wider than that in weekly earnings because of differences between workers in the security of employment, and the forms of payment throughout the year - for example, about 5 per cent of all male employees and 12 per cent of female employees worked short-time during the year 1968 in Japan (Source: Employment Status Survey).

(2) L.C. Hunter and D.J. Robertson, op. cit., p. 116. In this connection, M.W. Reder pointed out that in the United States there has also occurred, since 1941, a steady reduction of wage dispersion (Labor in a Growing Economy (1957), p. 366).

Figure 4 - 5

Estimated distribution of earnings

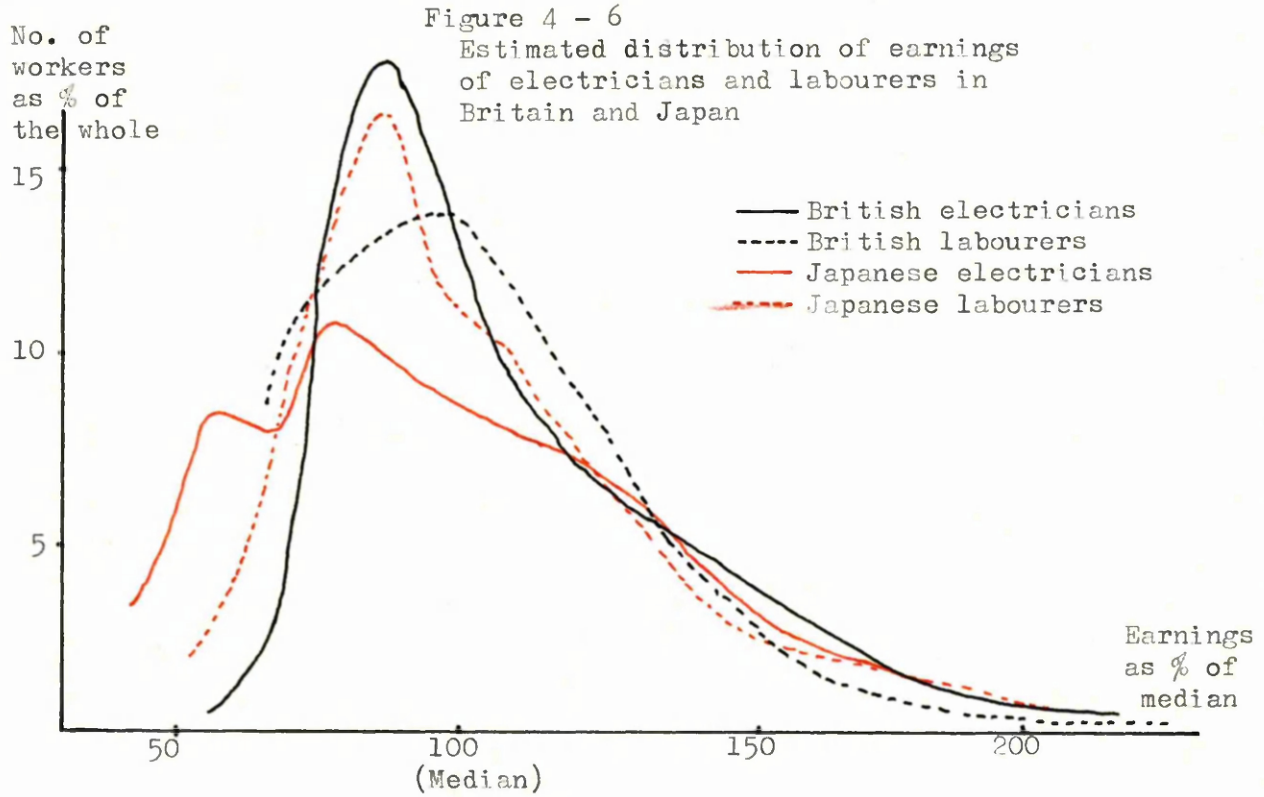


Note:- The earnings of British workers are for the weekly earnings of full-time employees in September, 1968 and those of Japanese workers, for annual earned income of employees in 1968.

Source: Employment and Productivity Gazette and Employment Status Survey.

Figure 4 - 6

Estimated distribution of earnings of electricians and labourers in Britain and Japan



Note:- The weekly earnings of full-time men paid for a full week, September, 1968, are used for Britain and the daily earnings of male workers in building trades, August, 1967, for Japan.

Source: Employment and Productivity Gazette and Yearbook of Labour Statistics.

order to answer these questions, we first look at the existing wage structure - differentials between occupations, between regions, between industries, between firms, etc. - in Britain and Japan, and, in the next chapter, attempt to construct a theoretical framework for explaining these differentials. We are particularly interested in inter-industry wage differentials in relation to movements in prices, because' .... the product market tends to be mirrored in the labour market and to determine the wage structure.' (1); in other words, there is supposed to be some relation between the movements in prices and wages. Not only is the product market mirrored in the labour market but the conditions of the labour market may also be reflected in the product market through the effect of wage costs on prices. In this sense wages determined in the labour market may be related to prices determined in the product market. The wage structure is a reflection of the labour market structure. As we shall discuss later, the labour market is structured in various ways and wide wage differentials between different workers may suggest the existence of separate labour markets for them, isolated from one another to a greater or lesser degree. The review of wage differentials may, therefore, help us to single out these separate labour markets and ascertain how wages are determined in each labour market. We also consider whether the existence of wide wage dispersion for the same category of workers or wide wage differentials between different types of workers may be ascribed to the inefficient operation of the labour market.

(1) J.T. Dunlop, "The Task of Contemporary Wage Theory", in G.W. Taylor and F.E. Pierson (eds.) New Concepts in Wage Determination (1957), pp. 135-6.

3. Occupational Differentials

As mentioned in the following chapters, apart from some professions and manual trades, the labour market is not so much developed for occupations in Japan as in Britain or other European countries, so that statistical data for occupational wage differentials in Japan is scanty and fragmentary. Despite this and other limitations, if we venture a comparison, we find that there is apparently a wider spread in earnings among different occupations in Japan than in Britain. Tables 4-2 and 4-3 in the following page show differences in earnings between occupations as on index, taking the median (or average) earnings of labourers as 100, and how much the earnings of the worker at the lower or upper quartile in the same occupation group deviate from the median. The mean coefficient of variation in the median or average earnings of different occupation groups is higher for Japan than for Britain.

The ranking of occupations by wage level is fairly similar between Britain and Japan (1). One big difference is in the relative position of clerical workers in the occupational wage hierarchy: their rank is still high in Japan, while it has dropped considerably since before the First World War (though this trend has been somewhat reversed after 1955) in Britain (2). One of the reasons for this

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(1) The pattern of occupational ranking in the United States is approximately similar to that in Britain and Japan (See L.G. Reynolds, op. cit., p. 464).

(2) L.C. Hunter and D.J. Robertson, op. cit., pp. 126-31. M.W. Reder pointed out that there had been a decline in the earning advantage of clerical over manual workers in the United States (See op. cit., pp. 459 - 60).

relatively high rank of clerical workers in Japan is probably that clerical work is still a man's job: six out of every ten such workers are male there, while the proportion is seven twentieths in Britain. Occupational wage differentials shrunk during and immediately after the Second World War but have gradually increased since the middle of the 1950's in Britain (1). But the established ranking of occupations is said to persist over a long period of time (2).

Table 4 - 2

Great Britain: Weekly earnings (median) of full-time male employees paid for a full week by occupation, as on index, earnings of a labourer = 100, September, 1968

Administrative and management	187
All other professional	177
Educational, welfare and medical	163
Technical and scientific	154
Other (production process workers, etc.)	120
Sales	119
Driver, docker, and other transport	118
Office and communication	113
Labourers	100
Service and security	99
Farming and horticulture	82

Note:- The mean coefficient of variation for these figures is 32.3.

Source: Employment and Productivity Gazette.

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(1) L.C. Hunter and D.J. Robertson, ibid.

(2) R.A. Lester, Economics of Labor (1964), p. 303.

Table 4 - 3

Japan: Average annual earned income of male employees by occupation, as an index, average earnings of labourers = 100, in 1968

Management and officials	370
Professional and technical	208
Clerical and kindred	173
Security	170
Sales	144
Transport and communication	141
Mining and quarrying trades	129
Production process workers and craftsmen	125
Service	110
Agricultural workers, lumbermen, and fishermen	102
Labourers	100

Note:- The mean coefficient of variation for these figures is 73.3.

Source: Employment Status Survey (Bureau of Statistics, Prime Minister's Office).

Manual-nonmanual differentials are also wider in Japan than in Britain, as shown in Table 4-4. They are narrower for females than for males in both countries. The percentage differential in earnings between manual and nonmanual workers has been on the decrease in the long run in Japan: it narrowed rapidly, as in [illegible].

Table 4 - 4

Average Earnings of Manual Workers as Percentage of Those of Nonmanual Workers by Selected Industries

	U.K.:		Japan:	
	Male	Female	Male	Female
Mining and quarrying	68	73	67	75
Construction	73	83	64	56
Manufacturing	76	88	69	72

Note:- The British figures are based on average weekly earnings in 1969 and the Japanese figures, average monthly cash earnings of regular production and non-production workers in 1967.

Source: Employment and Productivity Gazette and Yearbook of Labour Statistics.

as in Britain, during and immediately after the Second World War and then widened until the middle of the 1950's and diminished again thereafter (1).

One thing to be noted is that 'the range of earnings within each occupation is usually a good deal wider than the average difference between it and neighbouring occupations. (2) There are some workers who earn far more, while others earn much less, than the average in every occupation. For example, the earnings of the bottom ten per cent of male employees engaged in administration and management are less than one third of those of the top ten per cent in the same occupation and lower than even the earnings of the top ten per cent of labourers in Britain (3). This also holds true in Japan: The top two per cent of labourers earned more than two and a half times as much as the bottom two per cent of managers and officials did in 1968 (4). As a result, the median earnings in management and administration were 120 per cent higher than those in farming and horticulture, while in management and administration the highest-decile earnings were 240 per cent higher than the lowest-decile earnings in 1968 in Britain (5). This fact that differences in earnings

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(1) S. Ujihara, "Sangyokozo-no Henka to Chingin-seisaku", in Gendai Rodo-mondai Koza, vol. 2 (1967), p. 30.

(2) L.G. Reynolds, op. cit., p. 477.

(3) Source: Employment and Productivity Gazette.

(4) Employment Status Survey.

(5) Source: Employment and Productivity Gazette.

within a given occupation are greater than differences in the average earnings between occupations seems extremely conflicting with the hypothesis of classical economic theory that any worker in the same occupation would receive the same wages - even if we take account of imperfect competition in the labour market. This matter will be dealt with in the next chapter.

4. Inter-industry Differentials

Table 4 - 5 and 4 - 6 show inter-industry differences in the average earnings as relative to those of manufacturing industry as a whole and percentage increases in the average earnings by industry over period in Britain and Japan. The ranking of industries by wage level is strikingly similar between the two countries as far as manufacturing industry is concerned (1). This fact seems to be fairly universal, particularly among advanced industrial countries (2). In both countries the high-wage industries are vehicles, metal manufacture, printing and publishing, chemicals, and so on, while low-wage industries are clothing, textiles, leather goods, timber and furniture, and food processing (3). There is, however, no such similar relationship in the ranking of services and industries other

(1) The rank correlation coefficient for 12 comparable manufacturing industries between the two countries is 0.8698 (See Appendix VII).

(2) See, for example, T.S. Papola and V.P. Bharadwaj, "Dynamics of Industrial Wage Structure: an Inter-country Analysis", The Economic Journal, vol. LXXX, no. 317 (1970).

(3) R.A. Lester pointed out that high-wage industries in the United States, Canada, and other countries are petroleum refining, aircraft and automobile assembly, chemicals, printing, rubber tires and tubes, steel, while low-wage industries are cotton textiles and clothing, tobacco, leather goods, food processing, furniture, and fertilizer (op. cit., p. 307).

Table 4 - 5

Industry Wage Level, as an Index, the Average of All Manufacturing Industries = 100, in 1969 and Percentage Increases in it over 1961-69 in the United Kingdom

	Wage level	Wage increase
All manufacturing industries	100	57
Vehicles	115	55
Paper, printing and publishing	113	N.A.
Metal manufacture	104	54
Shipbuilding and marine engineering	103	87
Chemicals and allied products	101	60
Other manufacturing industries	99	61
Engineering and electrical goods	98	51
Bricks, pottery, glass, cement, etc.	98	58
Metal goods not elsewhere specified	97	54
Food, drink and tobacco	94	67
Textiles	89	58
Timber, furniture, etc.	89	56
Leather goods and fur	84	53
Clothing and footwear	84	53
Transport and communication	101	71
Mining and quarrying (excluding coal)	96	58
Construction	96	64
Gas, electricity and water	89	57
Certain miscellaneous services	83	60
Public administration	75	60

Note:- The wage level is for the average weekly earnings of manual male workers, April, 1969.

Source: Employment and Productivity Gazette.

than manufacturing by wage level. In Japan the wage level of these industries and services, except distributive trades, is higher than the average of all manufacturing industries, while in Britain the

Table 4 - 6

Industry Wage and Percentage Increases in it over Time for All Employees Working at Establishments with 30 or More Employees, in Japan

	Average monthly earnings: Wage level, as on index, all manufacturing = 100, in 1967	Percentage increase over 1958-68
All manufacturing industries	100	173
Petroleum and coal products	148	193
Iron and steel	142	150
Tobacco	127	194
Publishing and printing	127	185
Chemicals and allied products	121	157
Non-ferrous metal goods	119	166
Transport equipment	119	134
Mechanical engineering	112	192
Pulp, paper and allied products	104	148
Instrument engineering	99	178
Fabricated metal goods	99	212
Bricks, pottery, glass, cement, etc.	98	182
Electrical engineering	90	147
Rubber products	89	229
Food and kindred products	85	174
Leather and kindred products	85	168
Other manufacturing	83	N.A.
Furniture and fixtures	79	200
Timber and wooden products	77	222
Textiles	67	208
Clothing	59	
Electricity, gas and water	159	156
Real estate	142	N.A.
Finance and insurance	129	132
Transport and communication	126	160
Mining	109	138
Construction	103	194
Wholesale and retail trades	99	153

Source: Yearbook of Labour Statistics.

average wages of manual male workers in manufacturing industry is slightly higher than that in other industries and services. Although the above remarks on the ranking of industries by the average earnings level are based on the earnings of male manual workers for Britain and those of all workers, regardless of sex and manual-nonmanual difference, for Japan, we must note that there are considerable variations between male and female or between manual and nonmanual workers in the pattern of industry ranking by earnings level (1).

Interindustry wage dispersion is generally wider in Japan than in Britain. The coefficient of variation in the average earnings among the male manual workers in different manufacturing industries (as percentage of the mean earnings of all manufacturing industries) is 9.36 for Britain and 14.87 for Japan. The same is true between British and Japanese nonmanual or female workers. Interindustry wage dispersion is narrower for male nonmanual than manual employees, and for male than female workers, in both countries. (2). It is generally admitted that interindustry wage differentials tend to contract in the long run. L.G. Reynolds and C.H. Taft pointed out that inter-industry as well as occupational differentials in most countries which

(1) The same sources as in Table 4-6 and 4-7 tell us that, for example, the highest-wage industry is transport and communication for female manual workers and public administration for female nonmanual workers in Britain; and that the wage level in petroleum and coal products is not high for female manual workers at all but wholesale and retail trades pay relatively high salaries to female employees in Japan; and so on.

(2) For example, the coefficient of variation in the average earnings among the male nonmanual workers in manufacturing is 5.11 for Britain and 12.04 for Japan.

they studied had declined in percentage terms since before the Second World War (1), though R.A. Lester asserted that 'the industry wage hierarchy has persisted over a half century with little change in the relative position of industries and little long-run tendency toward compression of percentage wage differences between industries.' (2). As shown in Table 4-7, in Japan, the wage level of lower-wage industries has risen faster than that of other industries, while there has been a decline in the relative position of transport equipment, pulp, paper, instrument and electrical engineering, which were among the highest-wage industry group a decade before. But some of the highest-wage industries like petroleum and coal products, tobacco, publishing, printing, chemicals, and mechanical engineering have improved their relative wage level further during the last decade. The average wage level of manufacturing industry as a whole has also improved relative to that of non-manufacturing industries and services save construction. Among the broader industry groups, construction advanced markedly, while the rise of the wage level in distributive trades, and finance and insurance was comparatively slow. As a result, the mean coefficient of variation in the average earnings decreased from 19.0 to 15.6 for the broader industry groups and from 24.8 to 23.6 for manufacturing industries between 1958 and 1969 (3). Generally speaking, the wage level of low-wage industries and services rose faster than that of

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(1) The Evolution of Wage Structure (1956), pp. 352-3.

(2) Op. cit., p. 308.

(3) These figures are derived from data in Monthly Labour Survey.

higher-wage industries in Japan (1).

On the other hand, in Britain, though inter-industry wage differentials decreased between 1938 and 1948 (2), no comparable contraction among these differentials has occurred in more recent years. In contrast with Japan, improvements in the wage level were slower in some low-wage industries like clothing and footwear, and leather goods and fur, than in some higher-wage industries. In addition, the position of manufacturing industry as a whole relative to non-manufacturing industries and services slightly fell, so that inter-industry dispersion seems to have widened in the 1960's in Britain, as far as the earnings of male manual workers are concerned (3).

5. Inter-firm Differentials

Within a given industry there is considerable variation in the wage level between firms. There is a tendency for earnings to rise according to the size of establishment in both Britain and Japan, as shown in Table 4-7, 4-8, and 4-9, though Britain has some exceptions like cotton spinning, bespoken tailoring, and dressmaking. The range of size-of-firm differentials within a given industry differs considerably from one industry to another in both countries. In British high-wage industries tend to pay higher than the average wages to all workers employed in the industries (4) and in Japan firms in

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(1) The correlation coefficient between the industry wage level and percentage increase in it over time (See Table 4-7) is (-) 0.4280.
(2) L.G. Reynolds and C.H. Taft, op. cit., pp. 275-8.
(3) The correlation coefficient between the industry wage level and percentage increase in it over time (See Table 4-6) is 0.2092.
(4) The correlation coefficient between the highest-decile and the lowest-decile earnings in given industries is 0.6310 (See AppendixVII).

Table 4 - 7

Great Britain: Average weekly earnings of men, 21 years and over, in the last pay-week in October, 1958, as percentage of those for all establishments by industry and size of establishment

	Number of wage-earners employed:	
	Under 25	500 or more
Bread and flour confectionery	93	101
Cocoa, chocolate and sugar confectionery	88	103
Preserving of fruit and vegetables	81	105
Brewing and malting	96	109
Tobacco	91	99
Cotton spinning, doubling, etc.	107	104
Cotton weaving, etc.	93	107
Woollen and worsted	99	102
Hosiery and other knitted goods	84	109
Textiles finishing, etc.	88	109
Ready-made and wholesale bespoken tailoring	104	100
Retail bespoken tailoring	100	-
Dressmaking	104	97*
Manufacture of boots, shoes, slippers, etc.	90	101
Timber	94	106*
Furniture and upholstery	85	130
Paper and board	78	104
Printing and publishing of newspaper, etc.	74	111
Other printing and publishing, bookbinding	86	107
Chemicals and dyes	87	103
Pharmaceutical preparations, perfumery, etc	95	104
Mineral oil refining	83	101
Other oils, greases, glue, etc.	88	107
Rubber	84	102
Leather (training, dressing, etc.)	93	(104)
Leather goods	95	(106)
Bricks and fireclay goods	91	108
China and earthware	93	100
Iron and steel melting, rolling, etc.	83	102
Iron foundries	90	104
Non-ferrous metals smelting, rolling, etc.	90	103
Machine tools	99	102
Textiles machinery and accessories	91	103
Electrical machinery	92	102
Wireless apparatus and gramophones	87	100
Manufacture of motor vehicles and cycles	72	103
Motor vehicles repairs and garages	97	103
Manufacture and repair of aircraft	76	102
Manufacture of parts and accessories for motor vehicles and aircraft	86	102
Scientific, surgical and photographic instruments	88	104

Note:- The asterisked figures are for establishments with 100 or more wage-earners and the parenthesised, for establishments with 100-499 wage-earners.

Source: Labour Gazette

Table 4 - 8

Japan: Average monthly earnings of regular employees as percentage of those for all establishments with 5 - 29 employees by size of establishment (1967 average)

	Number of workers employed:		
	1 - 4	5 - 29	500 or more
All industries & services	65	100	159
All manufacturing			
male	74	100	153
female	80	100	145

Source: Yearbook of Labour Statistics.

Table 4 - 9

Japan: Average monthly earnings of regular male employees as percentage of those for all establishments with 5 or more employees by industry and size of establishment

	Number of workers employed:	
	5 - 29	500 or more
All manufacturing industries	78	119
Publishing, printing, etc.	77	145
Food and kindred products	76	132
Ceramic, stone and clay products	73	124
Timber and wooden goods	90	139
Pulp, paper and paper goods	78	123
Petroleum and coal products	67	107
Instrument engineering	83	123
Textiles	82	118
Vehicles	77	110
Clothing	94	123
Chemicals and allied products	75	104
Iron and steel	71	108
Mechanical engineering	88	114
Furniture and fixtures	96	120
Electrical goods	84	107
Non-ferrous metals	85	106
Rubber products	88	107
Leather and leather goods	94	107
Tobacco	-	102
Wholesale and retail trades	85	165
Finance and insurance	80	130
Real estate	78	124
Construction	85	126
Mining	78	109
Transport and communication	84	113
Electricity, gas and water	89	115

Source: Yearbook of Labour Statistics

high-wage industries pay high wages, irrespective of size of firm, though the correlation between the industry wage levels for small and large establishments is not very significant (1). But the average size of firms in a given industry is fairly strongly associated with the wage level of the industry in Japan (2): in other words, those industries consisting of large firms tend to have a high industry wage level. Thus it seems that the wage level of all firms in a given industry is affected by ruling conditions peculiar to the industry (profitability, technology, market structure, etc.), while large firms are likely to have a high wage level in any industry (with a few exceptions). We shall discuss these matters further in the next chapter.

Size-of-firm wage differentials are generally wider in Japan than in Britain. The average earnings of workers employed at establishments with 500 employees or more are, as shown in Table 4-9, about 50 per cent higher than those at establishments with 5-29 employees or alternatively, 130 per cent higher than those at establishments with less than 5 employees. Such wide inter-firm differentials are not found among the British industries listed in Table 4-8. The wage differentials between large and small firms in Japanese manufacturing industry widened before 1957 (when the average earnings of workers employed at establishments with 5-29 non-casual workers were 43 per cent of those at establishments with

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(1) The correlation coefficient is 0.3306 (See Appendix IX).

(2) The correlation coefficient is 0.5784 (See Appendix VI).

500 or more employees (1)) and, shrinking thereafter, the proportion was 62 per cent in 1969 (2). More remarkable is the narrowing of differences between firms in the starting salaries and wages of new school-leavers and other newly recruited older workers. The average starting wages of new school-leavers hired at an establishment with 30-99 employees were 72 per cent of those at an establishment with 500 or more employees in 1955 but these differentials have almost disappeared since the beginning of the 1960's, or the wages of the former sometimes even exceeded those of the latter (3). The narrowing of size-of-firm differentials is reflected in improvements in the wage level of some low-wage industries like clothing and textiles, timber and furniture, etc., because the average size of firms in these industries is small.

Lastly, we raise one question for discussion in the next chapter. Although the inter-firm differentials may be partly ascribed to differences in the composition of workforce by occupation, sex, etc. between firms, if we limit ourselves to some manual trades in the construction industry for which data on size-of-firm differentials are available for Britain, there is still the same tendency, i.e. the earnings of workers in an identical trade rise according to the size of firm (Table 4 - 10). How can we explain this?

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(1) S. Ujihara, op. cit., p. 29.

(2) Ministry of Labour (Japan), Rodo-hakusho (1969).

(3) Rodo-hakusho (op. cit.).

Table 4 - 10

Great Britain: Occupational analysis of average weekly earnings as percentage of those for firms with 24 or less employees by size of firm in construction (other than constructional engineering), January, 1969

	Number of manual workers employed:	
	29 - 99	100 or more
Building trades craftsmen	109	121
Electricians	111	116
Building labourers	104	117
Lorry drivers	102	126

Source: Employment and Productivity Gazette.

6. Geographical Differentials

Interregional wage differentials are also much wider in Japan than in Britain. As shown in Tables 4-11 and 4-12, for example, the average earnings of all workers in the lowest-wage regions (Sanin) were 29 per cent below those in the highest-wage region (Southern Kanto) in 1967 in Japan, while the difference in the earnings level between the lowest (South Western, though Northern Ireland is said to be the lowest in the United Kingdom as a whole) and the highest wage region (South East) in Britain is only 14 per cent. If we take the coefficients of variation in interregional wage differences (1), the results are as follows:

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(1) Data used here come from the same sources as in Tables 4-12 and 4-13.

Table 4 - 11

Great Britain: Regional analysis of median earnings of full-time men paid for a full week as percentage of the median earnings for whole Britain, in September, 1968

South East	107
East Anglia	93
South Western	92
West Midlands	104
East Midlands	97
Yorkshire & Humberside	95
North Western	99
Northern	96
Wales	97
Scotland	95
Great Britain	100

Source: Employment and Productivity Gazette.

Table 4 - 12

Japan: Regional analysis of monthly earnings of all employees (both sexes) as percentage of the average for all Japan, in July, 1968

Hokkaido	100
Tohoku	87
Southern Kanto	113
Northern Kanto	87
Hokuriku	87
Tokai	95
Keihanshin	111
Kinki	87
San-in	80
San-yo	100
Shikoku	88
Northern Kyushu	97
Southern Kyushu	89
All Japan	100

Source: Yearbook of Labour Statistics.

11.3 for all workers in all industries and services, 15.3 for male and 13.9 for female workers in manufacturing industry in Japan; 4.9 for male manual, 6.0 for male nonmanual, 5.0 for female manual, and 5.9 for female nonmanual workers in Britain.

Interregional differentials are partly ascribed to differences in the industry mix and occupational composition of labour force. Even after allowing for these differences, however, there still remain genuine differentials between regions (1). Tables 4-13 and

(1) See Employment and Productivity Gazette (March, 1969).

4-14 show earnings dispersion for workers of some trades in the construction industry in both countries. As compared with the above-mentioned coefficients of variations in interregional wage differences for all workers, that for an identical trade is remarkably greater, especially in Japan: 22.6 for electricians, 19.4 for heavy labourers, and 26.9 for lorry drivers in Japan; 7.6 for electricians, 6.1 for building labourers, 5.1 for lorry drivers, and 13.1 for electricians' labourers in Britain. Under these circumstances we are inclined to doubt the presence of a national occupational market

Table 4 - 13

Great Britain: Regional analysis of average weekly earnings as percentage of the average for South Western by occupation in construction industry (other than constructional engineering), in January, 1969

	Electricians	Building labourers	Lorry drivers
South East	121	120	113
East Anglia	103	102	111
South Western	100	100	100
West Midlands	114	107	116
East Midlands	111	105	110
Yorkshire & Humberside	110	106	111
North Western	116	115	117
Northern	107	106	114
Wales	97	102	104
Scotland	115	113	113

Source: Employment and Productivity Gazette.

Table 4 - 14

Japan: Regional analysis of average daily earnings as percentage of the average for Southern Kyushu, by occupation in construction industry, in 1967

	Electricians	Heavy labourers	Lorry drivers
Hokkaido	**96**	**147**	**189**
Tohoku	100	109	110
Southern Kanto	**148**	**155**	**163**
Northern Kanto	128	122	124
Hokuriku	**106**	**127**	**127**
Tokai	128	143	148
Keihanshin	**146**	**156**	**158**
Kinki	158	144	145
San-in	**109**	**97**	**101**
San-yo	116	123	128
Shikoku	**113**	**115**	**119**
Northern Kyushu	114	113	108
Southern Kyushu	**100**	**100**	**100**

Source: Yearbook of Labour Statistics.

for these workers, particularly in Japan, and suspect that the local labour markets are much better developed than the national labour market. These questions will be dealt with in the next chapter.

Regional wage differentials are said to be most persistent over time (1). In Britain the wage "rate" differentials between regions have decreased since before the First World War (2) and 'differences in formally negotiated wage agreements between one district and another are now relatively small', partly because 'trade unions set themselves the elimination of these differences' and partly

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(1) L.C. Hunter and D.J. Robertson, op. cit., p. 117.
(2) L.G. Reynolds and C.H. Taft, op. cit.

because the minimum rates of wages fixed by statutory wage boards tended to raise wage payments in specially low-wage areas. (1) In Japan interregional differentials have also declined in recent years. For example, the differences between regions in the starting wages of new school-leavers have narrowed remarkably since the middle of the 1960's, though there has appeared a sign of their reopening in 1969 (2).

Incidentally, some empirical studies in the United States show that the community wage level tends to rise with the population size of the community, though cities of a given size in the high-wage areas are likely to pay more than cities of the same size in the low-wage areas (3). This is also true in Japan, as shown in Table 4-15 in the next page, though the population size of the community is not the sole determinant of the community wage level. Despite its relatively small population size, the City of Kobe has the highest wage level among the seven largest cities in Japan, partly because high-wage industries and highly-paid nonmanual workers employed by large firms are concentrated in the area. The relatively low wage level of Osaka, Nagoya, and Kyoto may be accounted for by a high ratio of smaller firms, self-employed and family workers and the concentration of light industries, commerce, and services (4). Kitakyushu, where heavy industries based on coal produced in the

(1) L.C. Hunter and D.J. Robertson, op. cit. p. 116.
(2) Ministry of Labour (Japan), Gakusotsusha Shoninkyu Chosa (1970, pp. 80-83.
(3) L.G. Reynolds, op. cit., p. 478. Also see M.W. Reder, op. cit., pp. 359-60.
(4) Although we do not quote for brevity, statistical evidences are available from Employment Status Survey.

surrounding area have developed and large firms are concentrated, has been able to recruit at relatively low wages necessary manual labour from the surrounding rural area and declining coal industry.

Table 4 - 15

Japan: Intercity analysis of average annual earnings of employees and related factors, in July, 1966

Seven largest cities with more than one million inhabitants	Wage level (All Japan = 100)	Employees (in '000)	No. of workers in firms with 1000or more employees as percentage of total employees	No. of non-manual workers as percentage of labour force
(Southern Kanto)				
Tokyo	126	3,407	22.3	37.6
Yokohama	124	821	34.1	34.8
(Tokai)				
Nagoya	114	744	27.7	31.7
(Keihanshin)				
Kyoto	117	437	19.5	31.0
Osaka	115	1,060	19.1	31.3
Kobe	128	433	33.0	39.1
(Northern Kyushu)				
Kitakyushu	107	358	36.3	30.1
All Japan	100	30,523	23.3	24.3

Note:- Farmers as percentage of total occupied population in four largest conurbations:

Keihin (Tokyo, Yokohama), 6.6% ; Chukyo (Nagoya), 10.4;
Kitakyushu-Fukuoka, 13.3% ; Keihanshin, 6.4%

Source: Employment Status Survey.

Finally, we quote the remarks of M.W. Reder on factors affecting inter-city differentials: '(i) Small urban areas tend to serve as way-points in rural-urban migration; (ii) Large cities are the

places where the most highly specialized, and hence best paid, work is done; (iii) Large plants tend to be located in large cities'; In addition, 'in a high wage city the wage cost and, hence, the prices of locally manufactured products and service will tend to be comparatively high, and conversely.' (1)

7. Age Differentials

As shown in Figure 4 - 7 in the following page, the general pattern of age differentials in Britain and Japan is quite similar in many respects: With the advance of age the earnings of a male worker go up to a peak (for a British worker, in his thirties and for a Japanese worker, in his forties) and diminish thereafter, while those of a female worker rise much more slowly until she reaches her late twenties and do not vary very much thereafter but finally, slightly drop in her sixties. The earnings of British workers, either male or female, increase more rapidly, but begin decreasing sooner, than those of the Japanese counterpart, as they advance in years. As far as adult men are concerned, as shown in Figure 4-8, the earnings of a Japanese worker, either manual or nonmanual, rise with the advance of age faster than those of a British worker. (The rise in the earnings of a British manual worker with his ageing is very slow and small). As we shall discuss later in Chapter 6, however, the pattern of age differentials differs very much between large and small firms in Japan: The pattern for Japanese workers

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(1) M.W. Reder, op. cit., pp. 361-3.

Figure 4 - 7

Earnings by age (I)

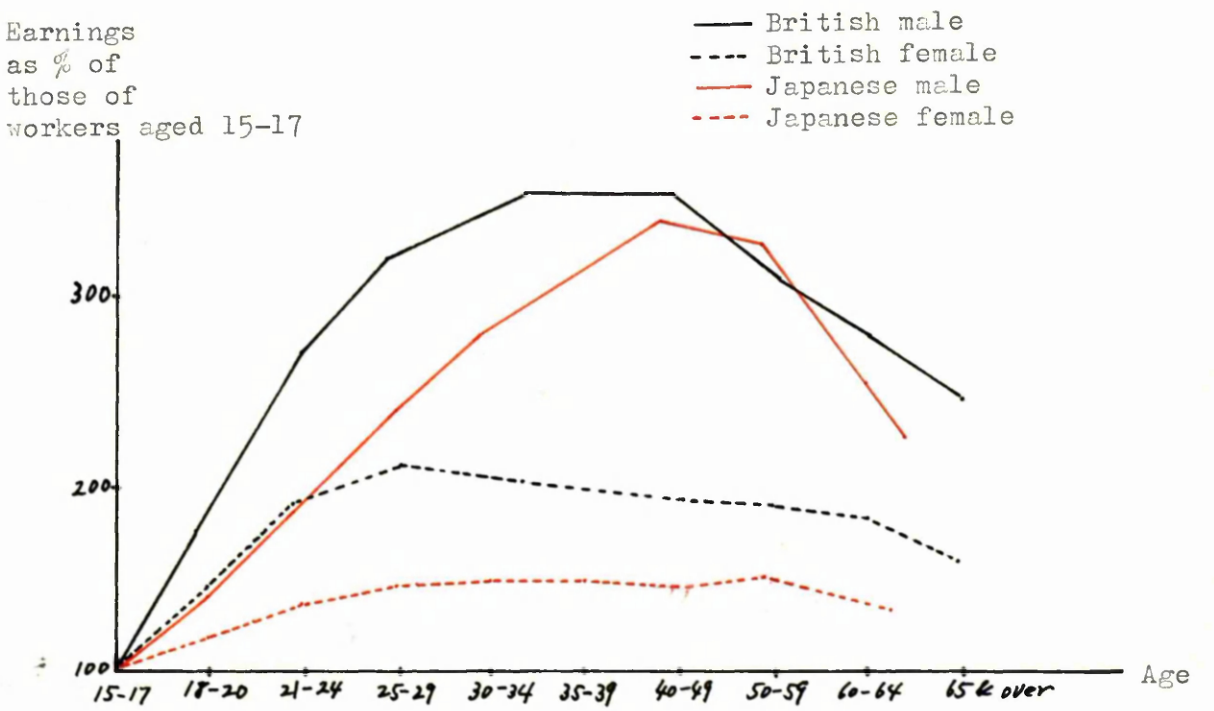

Figure 4 - 8

Earnings by age (II) (male workers)

Note:- 1. British data are for median weekly earnings of full-time employees paid for a full week as percentage of those of employees aged 15-17 or 21-24, September, 1968.
2. Japanese data are for average monthly earnings as percentage of those of employees aged 15-17 or 20-24, April, 1967.

Source: Employment and Productivity Gazette; Ministry of Labour, Basic Survey of Wage Structure.

employed at small firms or on a casual basis at large firms is rather similar to that for British workers.

In Japan age differentials narrowed during the Second World War, widened from immediately after the war till the beginning of the 1960's and have again shrunk thereafter (1). Wage differentials between juvenile and adult male workers are wider in Britain than in Japan but they have also been narrowing in recent years (2).

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(1) F. Nagano, "Nenreibetsu Seibetsu Chingin-Kakusa no Suii", in K. Ogochi, et al. (eds.), Gendai Rodo-mondai Koza (1967), pp. 97-8.

(2) L.C. Hunter and D.J. Robertson, op. cit., p. 120.

CHAPTER 5.

THEORETICAL FRAMEWORK FOR WAGE ANALYSIS

1. Towards a Unified Theory of the General Wage Level and Wage Differentials

In classical economic theory the general level of prices was determined by the quantity of money, either in crude terms of a fixed velocity of circulation and level of output, or in more refined terms of equality of the market rate of interest with the rate required to maintain full-employment equilibrium of the system. Under the assumption of full employment the general level of money wages also moved with changes in the quantity of money. If there was unemployment, however, the increase in money supply would not directly determine the price level because it would, as an increase in effective dmand, simply raise the level of output, but the money wages would move to whatever level would produce the real wages consistent with full-employment equilibrium. In the Keynesian system the money wages were assumed as inflexible downwards (1), so that the labour supply curve was perfectly elastic at the prevailing money wage up to the level of full employment and thereafter had a positive slope. As is empirically proved, in a high-employment economy

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(1) The downward inflexibility of money wages is often ascribed to trade unionism, statutory minimum wage system, or management inertia. M.W. Reder proposed SM (social minimum) as a cause of this ("The theory of occupational wage differentials," in American Economic Review, vol. 44, 1955, pp. 833-52. As a matter of fact its prevalence has been emphasised in the preceding chapters. But E.H. Phelps Brown pointed out that it had existed long before trade unionism grew in strength (See footnote (1), p. 3 in Chapter 1).

there is a determinate relationship between the quantity of money and the price level (and the general level of money wages), though the relationship between the rates of change in the two is not so straightforward (1).

While the monetarist takes the quantity of money as an autonomous variable, other people have thrown doubt on it and asserted that the money wages are autonomously determined by collective bargaining, the monetary authorities automatically adjusting the money supply to it accordingly so as to prevent unemployment. Neither of the arguments has yet received a unanimous acceptance nor has been established by empirical fact. In this connection H.G. Johnson rightly pointed out that 'in a modern economy, therefore, the money supply and the wage level are jointly determined by the balancing of full employment against other policy objectives such as internal price stability, or the maintenance of the balance of payments without devaluation or intensification of import and exchange controls.' (2)

As regards the determination of relative prices and real wages there was a dichotomy between the 'real' and 'monetary' hypotheses in classical economic theory. The latter was only

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(1) For example, there is a good positive correlation between the indexes of consumer prices and money supply during 1956-69 in the United Kingdom (coefficient of correlation, r = 0.0928) and Japan (r = 0.9940) but not between the rates of change in the two in the U.K. (r = 0.0391) and Japan (r = 0.5396).

(2) Harry G. Johnson, "The Determination of the General Level of Wage Rates" in the Theory of Wage Determination (1957), edited by John T. Dunlop, pp. 31-38.

concerned with the determination of the absolute price level. In the former, relative prices, including the real wages of various types of labour, were determined by productivity, factor scarcity, and tastes, and were independent of the quantity of money (and therefore the absolute price level). However, part of the quantity of money supplied is not immediately exchanged for goods and services but held for a period of time for various purposes, which creates demand for money itself. This in turn implies that the quantity of money is not independent of relative prices and real wages: the quantity of money influences the determination of relative as well as absolute prices (1). In wage theory it follows that the real as well as money wages are codetermined.

In their world-wide analysis of the determination of the general wage level (2), Turner and Jackson have showed that the rate of increase in money wages is positively connected with (i) that in real wages and (ii) the degree of inter-industry linkage of wage increases, and is negatively related to (iii) the spread of wage increases between industries and (iv) the irregularity of earnings' growth. This implies that the movements in the level of money wages are not independent of those in the relative wage structure. There was a dichotomy between the theories of the general level of money wages

(1) For the analysis of this matter, see, for example, M. Fleming, Introduction to Economic Analysis (1969), pp. 336-75.

(2) H.A. Turner and D.A.S. Jackson, "On the Determination of the General Wage Level - a World Analysis", The Economic Journal (December, 1970), pp. 827 - 845.

and wage differentials and real wages. We need to bridge this gap in wage theory.

The wage structure is determined as a result of the interaction of conflicting forces, those which widen or maintain wage differentials and those which contract them. The questions arising from here are what these forces are, and whether there are any common factors between the forces contracting or expanding the wage differentials and those changing the general level of money wages.

2. Origins of Occupational Wage Differentials

We have seen in Chapter 4 that there is a wide wage dispersion among the workers in both Britain and Japan. The causes of wage dispersion are numerous, complicated and dynamic. A considerable part of it can probably be ascribed to differences in the regularity of employment between workers: for example, some workers work overtime and others, short-time. But much of it is connected with the way in which the wages are determined. In economic theory, if labour is perfectly homogeneous and the labour market is perfectly competitive (where there is not either monopoly or monopsony of labour, or any obstacle or cost to labour mobility and market information), the wage per unit of labour should be the same for all workers, just as the same price is supposed to be paid for each unit of a homogeneous commodity. If labour is not homogenous, i.e. different workers possess different kinds or degrees of skill, as is the case, wage dispersion will arise from this.

Although the wage rate may vary between different grades of skill or occupations, the same wage rate will still be paid to labour with the same grade of skill. The occupational wage differentials arise from differences between occupations in supply and demand conditions in the (occupational) labour market and, in the long run, will be such that they just cover differences in the costs of acquiring the required kind of skill through education, training, and on-the-job experience (including the potential wages forgone during the period of learning). For, if the current wage level for a given occupation more than covers the cost of maintaining the prevailing minimum level of living (which may or may not be equivalent to the wage level for the unskilled workers and which may vary from one society to another or from one stage of economic development to another in the same society) plus the cost of skill acquisition for the occupation, more workers will be induced to enter the occupation, which will result in pulling down the wages to an equilibrium level. Besides differences in the cost of acquiring skills, there are other causes of occupational wage differentials, which are mainly related to the nature of work: the environmental conditions of the workplace (physical and psychological pleasantness or unpleasantness), regularity and security of employment, etc. In the long run wage differentials thus determined will be the ones sufficient to equalise differences between occupations in these "non-pecuniary advantages or disadvantages" as well as the cost of acquiring the required skill. This theory of occupational wage differentials was, needless to say, first developed by Adam Smith.

So far we have assumed perfect competition in the labour market. As we have seen in the preceding chapter, however, the existing wage dispersion between occupations seems to be much wider than that theory would suggest. While the system of "equalising differentials" works fairly well within a given occupation, as B. Wootton rightly pointed out, there is no definite inverse relationship between the pecuniary and non-pecuniary advantages of different occupations; on the contrary, non-pecuniary advantages such as the pleasantness of the work, its social prestige in the community, regularity and security of employment, etc., are very often greatest in those occupations which carry the highest monetary rewards (1). Since most kinds of skill can be acquired through education or training (in other words, those jobs which require skill only based on special natural talents are relatively few) and intelligence is almost normally distributed among the population (2), occupational wage differentials would be narrower than those which exist if there were perfect competition in the labour market.

Occupational mobility, particularly upward mobility towards higher-paid (and socially highly ranked) occupations, is limited. One of the causes of imperfect mobility is the prevalence of various restrictions on entry into certain occupations: employers' selective hiring policies in respect of workers' personal (non-economic) characteristics, restrictive practices by trade unions or professional associations (sometime combined with legal regulations) concerning the

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(1) B. Wootton, The Social Foundations of Wage Policy (1964), pp. 54-60.

(2) A. Barnett, The Human Species (1968), pp. 194-7.

number of apprentices or trainees and the standard of skill required for particular occupations, and so on. While economists have dismissed these or other obstacles to factor mobility as negligible in the long run and concentrated on the analysis of the demand and supply sides of the market based on either the competitive or monopolistic model, sociologists have noted the ubiquity and importance of social discriminations in employment and income distribution and attempted to theorise about them. Their views on this matter, though not yet fully developed, may be useful in throwing light on the structure and mechanism of the labour market. In economic theory it is taken for granted that everybody is given equal opportunities for access to any occupation (the "equal opportunity model"). Historically this view is peculiar to industrial society. In traditional society it is a rule that the occupation is inherited from a father to his son or from a master to his journeymen (the "stability or inheritance model") (1). With the progress of industrialisation this principle of manpower allocation has been gradually replaced by the former principle. Even in most advanced industrial countries, however, a revised version of the 'inheritance' principle still partly survives: as a result opportunities for all occupations are not evenly distributed among different social classes.

Another cause blocking upward occupational mobility is lack of achievement aspirations on the part of workers in the lower echelons. But a more important cause is lack of market information. In this connection,

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(1) For the explanation of these two models, see L. Taylor, Occupational Sociology (1968), pp. 62-83.

L. Taylor pointed out(1):

"In urbanised societies in general the number of occupations has increased to such an extent that individual participants in the labour force have little opportunity for perceiving the total range of occupations, assessing their ability and aptitude, and selecting accordingly. In fact, due to informal factors and limited recruitment mechanisms, most individuals are reported to enter those occupations which are similar to those of their parents, or an occupational category that is immediately adjacent to that of the parental generation."

The character of the occupational labour market differs considerably from one occupation to another. In Table 5-1, Column (A) shows the proportion of those workers in a given occupation who moved from one job to another within the same occupation or otherwise during 1967-8 in Japan. According to this, administrative officials, managers, professional men, and technicians are among the least mobile occupational groups, while labourers and workers engaged in transport and communication and services are among the most mobile. That is to say, about 2 per cent of managers, professional men, etc., changed jobs during the period, while the proportion was 6 or 7 per cent for labourers and transport workers, etc. The occupational markets for professional, clerical, and production workers (including craftsmen) are of a closed type in the sense that they mainly take in previously unoccupied persons, such as new school-leavers and university graduates, rather than admit job-changers from other occupations (as shown in

(1) L. Taylor, op. cit.

Column (C) and (D) in Table 5 - 1, about four fifthsof the newly hired persons during the period were previously unoccupied and the remaining one fifth, job-changers from other occupations), and job-changers previously engaged in those occupations seek jobs in the same occupation rather than move to other occupations. (In Column (B), about 60 per cent of job-changers in those occupations moved within the same occupation, as compared with 34-37 per cent for labourers and sales workers). In short, the mobility of professional, clerical and production workers tends to be limited within the same occupation. On the other hand, the occupational markets for labourers, sales and service workers are of an open type: job-changers from other occupations are admitted into these markets.

Table 5 - 1

Occupational Mobility in Japan, during 1967-68

	Job-changers as percentage of total labour force in the occupation (A) %	Job-changers who moved within the same occupation as percentage of the whole (B) %	Composition of newly hired persons by origin: Previously unoccupied (C) %	Composition of newly hired persons by origin: Job-changers from other occupations (D) %
Management & administration	2.3	41	26	74
Professional & technical	2.5	58	85	15
Clerical & kindred	4.1	57	84	16
Sales workers	4.1	37	66	34
Transport & communication workers	7.2	60	44	56
Production process workers & craftsmen	4.6	63	78	22
Labourers	6.1	34	58	42
Service workers	5.9	50	69	31

Source: Employment Status Survey (1968).

Such an occupational market structure contributes to the maintenance of occupational wage differentials apparently wider than those which would simply equalise net advantages and disadvantages between occupations. Assisted by imperfect occupational mobility, the pay level for some occupations, particularly socially high-ranked ones, is partly at least determined according to the social status of workers engaged in those occupations (the "status theory of payment") rather than their economic function or performance (the "functional theory of payment") (1). 'Status' pay must be sufficient to ensure that all workers engaged in the occupation concerned are able to maintain their standards of living at a level appropriate for their social prestige. With a few exceptions, those workers who hold a higher position in an organisation are paid higher than those who hold a lower position. The status structure of an organisation tends to be reflected in its internal pay structure. The system of status pay is probably more prevalent and more important in traditional society than in modern industrial society and more so in non-manual occupations than in manual occupations.

We have found in the preceding chapter that there is wide wage dispersion even within the same occupation, besides wage differentials between occupations. Apart from the absence of perfect competition in a given occupational market, differences in wages for the same kind of labour may arise from the very nature of labour as well as the nature of the work: labour as a commodity is not separable

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(1) For further analysis on this subject, see D.C. Miller and W.H. Form, Industrial Sociology (1951), Chapter 11.

from the worker who sells it and those jobs which require the same kind of labour may have minor differences in advantages and disadvantages, though more or less similar in main characteristics, from a worker's point of view. In case of an ordinary commodity, the seller is not usually concerned about how and where the buyer uses it and its price will not, therefore, vary with the use to which it is put. But workers usually have to subject themselves for some period of time to the control of the employer to whom they sell their labour, so that they are much concerned about the characteristics of the job, as well as wages, which he offers them. Just as two jobs requiring the same kind of skill do not always carry the same conditions of work, workers with the same grade of skill have different personal characteristics such as age, race, sex, educational career, social class background, etc. The employer often discriminates against particular workers according to these personal characteristics (1). In a given occupational market the employer seeks workers with the appropriate kind of skill and the worker seeks a job of the kind suitable for his skill. In addition, the former has a preference for workers with certain personal attributes (which, together with skill requirements, constitute his hiring standards) and the latter, for jobs with given characteristics. These factors, as well as the absence of perfect competition, are the primary origins of wage dispersion within an occupation. What makes the matter more complicated is that

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(1) As regards discriminations based on race, sex, etc. in the United States, see L.G. Reynolds, op. cit. pp. 483-5. Also see W.W. Daniel, Racial Discrimination in England (1968), Part 3.

the hiring policies differ from one employer to another and that the scale of preference for jobs differs from one worker to another. But this may be trivial.

3. Analysis of Interindustry, Interregional, and Inter-firm Wage Differentials, etc.

In traditional wage theory wage differentials were only associated with skill differentials: Different wages would be paid to different types of labour for which separate markets were assumed, though more or less related to one another depending on the degree of substitutability between types of labour. But this theory does not throw light on other types of wage differentials which we dealt with in the preceding chapter, save that in the long run such wage differentials would merely reflect differences in skill proportions, or occupational composition of the labour force, between industries, between regions, or between firms. Contrary to this, we suggested in the preceding chapter that there were genuine interindustry, interregional, and inter-firm wage differentials, and pointed out in Section 2 of the present chapter that there were some factors producing wage dispersion within the same occupation: jobs which required the same kind of labour might differ from one another in work intensity, unpleasantness, etc., and consequently remunerations for them might vary. In addition, some jobs which have the same title may have different content between industries or between firms within a given industry. Although we unfortunately have no detailed and extensive information about these points, it does not seem that

these factors alone are sufficiently important to explain the wide wage differentials which do exist (1). We shall content ourselves with showing other examples concerning near-genuine inter-industry, interregional and inter-firm wage differentials.

In Japan there is an extensive survey of the starting salaries and wages of new school-leavers who have not yet had any experience on the job nor received any particular form of vocational training or apprenticeship (so that they can be regarded as identical unskilled labour) (2). According to the survey, these salaries and wages differ considerably between industries (in the same locality), between firms (within the same industry in the same locality), and between regions. For example, in Tokyo, the starting monthly earnings of a boy having recently left junior high school ranged from 16,591 yen, median in the lowest-wage industry (construction: the earnings of the worker at the lower quartile was 16,174 yen and those at the upper quartile, 17,048 yen) to 24,203 yen, median in the highest-wage industry (transport and communication: the earnings of the worker at the lower quartile was 21,325 yen and those at the upper quartile, 24,605 yen) in June, 1968; or from 17,542 yen, median at a firm with 30-99 employees to 10,014 yen, median at a firm with 500 employees or more, in manufacturing industry in the same month. As regards geographical differentials, the starting monthly earnings

(1) A recent American study found that some intra-occupational wage differentials were partly explicable in terms of differences in labour force 'quality' but that other factors remained extremely important especially for manual workers (See A.Reesand S.P. Schultz, Workers and Wages in an Urban Labor Market (1970).

(2) Ministry of Labour, Shinki-gakusotsusha Shoninkyu Chosa.

of a boy of the said category ranged from 10,500 yen in Wakayama-ken to 21,682 yen in Saitama-ken in May, 1969.

What are the causes of these types of wage differentials? In order to answer this question we put forward a hypothesis that the markets for factors of production, capital and labour, are "fragmented" or "structured" due to their limited mobility between firms, between industries and between localities, and ignorance on the part of the supplier of these factors. The present state of both product and factor markets is far from a perfectly competitive model. Many of the existing product markets are dominated by big manufacturing firms and capital market, by big financial institutions as lenders of money and big enterprises as borrowers. The labour market seems not to suffer so much from monopoly or

monopsony (though some people might argue that monopoly by trade unions, monopsony by big firms or bilateral monopoly by both is more important (1)) as from inadquacy of labour mobility and limited availability of market information, because of the peculiarities of labour, differing much from capital (which is perfectly homogeneous, though its available amount and direction of flow can be controlled by big financial institutions, monetary authorities or government policy): numerous workers supply a small amount of labour to the market respectively; labour is very heterogeneous so

(1) For example, S.H. Slichter, "Do the Wage-Fixing Arrangements in the American Labor Market Have an Inflationary Bias?" in American Economic Review Vol. 44 (1954) pp. 322 - 46.

that the interests of workers are not always one and the same; labour is perishable so that resourceless workers who have to support themselves and their family cannot withhold the selling of their labour for a long time; workers may have the feeling of attachment to a particular employer or community, while the employer may be unwilling to replace his loyal employees with outsiders only for lower wages, so that the transfer of workers from one employer or community to another will entail extra psychological as well as economic cost (Even the economic cost of their transfer from one locality to another will be far greater than that of goods or capital, if they have to change residences and accompany their family) (1); and so on.

First, we think that the labour market is fragmented at the firm or plant level. Each firm or plant has a compartmentalised labour market for its own needs (which will hereafter be called "internal market", as contrasted with "external market" standing for local or national labour market). The internal labour market consists of one employer and his employees; the former exclusively and continuously buys labour services from the latter and the latter exclusively and continuously sell their labour services to the former, for a period of time. The reason why the internal market develops is that it is beneficial to both sides. For the employer continuous and stable labour supply is essential to continuous and efficient production, and the stability of his workforce saves him additional

(1) H.W. Richardson used the term "social distance costs" for that earnings differential which is necessary to 'bribe the migrant to give up his home environment'. (Regional Economics (1969), p. 296).

cost of recruitment and training. Particularly in the case of labour of the type which is scarce in the external market and for which the employer has incurred a high cost of training, the necessity of retaining such a type of workers is great. For the worker the security of employment and the stability of income are indispensible to the maintenance of a normal family life, and continuous and stable employment saves him the risks of unemployment and the cost of job hunt. For these reasons the employer tries to retain workers by various means: high wages are one of them; more important are fringe benefits related to length of service, such as private pension schemes, redundancy payments, longer paid holiday, etc. (1). The seniority principle concerning promotions and layoffs has also been supported by both employers and workers. (2).

The internal market is more or less related to the external market. The employer who needs more workers has to recruit them from the external market. Workers who quit an employer and want to take up a new job have to go to the external market. The employer has little control over the external market, except for those cases in which one or two big employers dominate a small local labour market, but he has almost perfect control over the entry of workers into his firm through selective hiring policy. He does not usually open the door to outsiders (from the external market) for all jobs at his firm but, more

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(1) 88 percent of the Japanese firms with 30 employees and more (98 per cent for firms with 1000 employees and more) had some kinds of retirement or severence allowance (either lump-sum payment or pension) schemes in 1966 (Source: Ministry of Labour).

(2) L.G. Reynolds, op. cit. pp. 199-207.

often than not, limits their entry to particular kinds of jobs such as unskilled labour at the bottom of the company's job hierarchy and some kinds of professions or technical trades, and reserve good jobs for insiders (employees already in his employment), if suitable workers are available from among them. On the other hand, he has no effective control over voluntary resignations. Trade unions may try to restrict the employer's discretion in hiring and firing workers.

The large firm is likely to have a better developed or highly isolated internal market. It is known that turnover rates are lower at large firms than at small firms (Table 5 - 2). The internal market of large firms is of a more closed type than that of small firms.

Table 5 - 2

Japan: Turnover Rates by Size of Establishment in Manufacturing (%)

Year	500 employees or more		100-499 employees		30-99 employees		5-29 employees	
	A	B	A	B	A	B	A	B
1965	20.1	21.6	29.4	30.2	34.1	33.9	34.9	31.7
1966	18.5	19.3	28.2	28.0	33.5	32.6	34.8	30.3
1967	25.1	21.1	32.6	30.5	39.1	35.6	32.0	30.0
1968	24.7	21.7	33.1	29.9	34.5	32.7	30.8	38.7
1969	24.5	22.0	32.0	28.9	32.1	31.3	30.2	28.2

A: Accession rates. B: Separation rates

Source: Ministry of Labour (Japan)

Japanese firms do not, as a rule, hire workers other than new school-leavers and university graduates to fill clerical or administrative jobs, or key manual jobs from which workers will be promoted to a higher supervisory or skilled jobs later. Only the types of labour for which they open opportunities to job-changer from the external market are

unskilled jobs on a casual basis (1). On the other hand, the internal market of small firms is relatively easy of access from the external market, or of an open type (2). The structure of internal labour market will be discussed further in the next chapter in connection with the internal wage structure.

Inter-firm wage differentials primarily arise from the development of internal labour market and differences between firms in profitability or labour productivity. The reason why some firms competing with other rival firms in both product and labour markets pay higher wages than the latter is not explicable by a competitive market model. Large firms usually pay higher wages than small firms, although they have to sell their products at the same price as other firms in the same industry. Higher wages are ascribed to higher labour productivity per worker, smaller profits and dividends as a share of the commodity price, or a combination of them. Since smaller than normal profits are disincentive to further investment, it is difficult in the long run to maintain a higher wage level than the average. We infer, therefore, that the main source of high wages is high labour productivity. But this simply means the ability of efficient firms to pay high wages and not the necessity of their doing so, for they can increase their undistributed profits or dividends to shareholders

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(1) S. Funabashi, Rodoshijo to Chinginkeitai (Labour Market and Forms of Wage Payment,) (1966), pp. 126-136.

(2) Only one third of 200,000 workers who quit establishments with 500 employees or more were hired again at other establishments of the same size and the remaining two thirds went to smaller establishments, while 12 percent of 900,000 workers who left establishments with 5-99 employees entered larger establishments and 68 percent found a job with other establishments of the same size. (Source: Ministry of Labour (Japan)).

instead. There must be some tangible or intangible advantages which justify it. What first comes to our mind is that, since there are substantial differences in efficiency or degree of skill among the individual workers of the same occupation, prosperous firms may try to skim the best cream of the labour force available in the external market or retain best workers by offering them better pay and conditions of work. This may, in turn, contribute to raising or maintaining labour productivity at a high level. Or they may try to secure more labour from other firms in a tight labour market, though it is a self-defeating tactics except for a short time. Managers of large firms may try to establish a reputation as good employers in the local community because they are often, or hope to be, looked upon by local people as respectable partners. It also makes it easier for them to recruit labour in the local market. They may try to acquire the 'good-will' of their employees (1), which will conduce to the stability of labour-management relations. Where some kinds of skilled labour are extremely scarce and employers have to secure such labour by costly internal training, it will certainly be sensible to retain these types of labour even by paying high wages. These are supposed motives of a large firm for paying higher than the average wages. Since the employees of large firms are generally more unionised, than those of small firms, particularly in Japan, trade unions may play a role in producing inter-firm wage differentials.

The reasons why average labour productivity is usually higher at large firms than at small firms are various. Economies of scale

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(1) M.W. Reder, op. cit. p. 332. Also see R.A. Lester, op. cit. pp. 310-12.

are probably the most important factor for this (1). Modern techology requires investments in large lumps so that capital accumulation tends to concentrate in large firms, rather than to be scattered over multiple small firms. As a result, differences in labour-capital ratios and labour productivity tend to widen between large and small firms. In order to make large-scale investments firms have to raise money in capital market, obtain loans from banks, or plough back undistributed profits. In this respect large firms have several advantages. Besides, there are considerable differences in the rate of technical progress and innovation and managerial talent between firms. We may well say that capital, managerial and scientific talents are unevenly distributed among the firms - more concentrated in large firms. But, of course, this is a general story. In some industries economies of scale are not substantial but the size of an optimum plant is relatively small, so that small firms can compete well with large firms without depending on cheaper labour.

Geographical wage differentials again arise from the fragmentation of national factor markets and the uneven distribution of labour, capital, managerial and scientific talents among the regions, besides differences in industry-mix and skill composition of the local labour force. Distance (the meaning of distance as used in this context is not limited to geographical distance but it is a concept including distance measured in terms of time taken for journey after allowing for the degree of development of transport and communication

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(1) M.A. Utton, op. cit. pp. 18 - 21.

facilities and psychological distance arising from differences in social and cultural setting, availability of housing and amenities, etc. between local communities) is probably the most formidable obstacle to the mobility of products and factors of production, especially labour, and the flow of market information. (1) At early stages of industrialisation markets for many products and factors of production were localised because of poor transport and communication facilities (2). As industrialisation has progressed, the traffic of goods and people has increased and local markets have been linked with one another. Even today the markets for some commodities (including services) still remain mainly local due to their nature. And the labour markets are still primarily organised on a local basis for many occupations. This is illustrated by comparison between intra-regional migration and out-migration rates of labour. The ratios of migration within the region (per 1000 residents) were between 89 (London and South Eastern) and 68 (Wales), while those of outmigrants to other regions were between 27 (Southern England) and 5 (West Central Scotland) during 1960-61 in Great Britain (3). Although these ratios are not a direct indicator of labour migration, they show that there is far more migration within the region than between regions. This is confirmed by Japanese data as well. In Japan, the workers who moved to other addresses within the region were 7 percent of total working population, those who migrated to other regions were 2 percent, and 91 percent stayed at the same address, during 1967-68.

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(1) It is suggested that distance bears upon migration (T.H. Hollingsworth, Migration (1970), pp. 63 and 164).
(2) See W.H.B. Court, op. cit. pp. 65-72.
(3) T.H. Hollingsowrth, op. cit. p. 32, Table 3.1.

As far as job-changers are concerned, the proportion of out-migration to other regions was considerably higher (12 per cent) and yet the far greater majority (88 percent) found jobs within the region (1). Thus most job-seekers first look at the local market in the area where they live. If there are no suitable jobs available there, then they think about looking for jobs in other areas. Some workers are in the dark about the situation of other local markets or do not find it worthwhile to move to other areas to get a job because the cost of doing so is unlikely to be made for by expected future incomes from it, so that they will stay unemployed. Geographical mobility differs very much between various types of labour. Young single people and white-collar, particularly professional, workers are more mobile than older, married people and manual workers. 'Migratoriness rises to a peak in the early twenties and falls thereafter rather slowly.' (2) It is said that there is a high positive correlation between intelligence and migration (3), which seems to have important implications in relation to the distribution of managerial and scientific talents between regions.

The distribution of stocks of capital and labour is uneven among the different regions, due to their inter-regional migration and differences in the rates of their intra-regional accumulation. L.G. Reynolds and C.H. Taft pointed out as causes of interregional wage

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(1) Source: Employment Status Survey (Japan).
(2) T.H. Hollingsowrth, op. cit. p. 63. The workers who changed addresses during 1967-68 as percentage of the total labour force of the same age group were 15 percent for the group aged 15-24, 13 percent for 25-34, 5 percent for 35-54, and 2 percent for 55 and over in Japan (Source: Employment Status Survey). For occupational analysis of migration, see the said book of Hollingsowrth (pp. 53-64).
(3) ibid. pp. 156-9.

differentials 'the rate of population growth relative to the rate of industrial expansion; the changing economic fortunes of agriculture relative to industry; the geographical distribution of new births relative to the distribution of new jobs; and the responsiveness of labour and capital migration to wage differentials.' (1) Generally speaking, both capital and labour tend to agglomerate in urban, industrial areas where there is great demand for them. (2) In classical economic theory inter-regional imbalances in the distribution of capital and labour would automatically be rectified through adjustments by the market mechanism. In dynamic economics, however, the rate of migration between regions differs between capital and labour and the rates of population growth and capital accumulation within the region vary between regions. Capital funds for new investment are highly mobile, while fixed capital stock is tied to a given location (which may be one of the reasons why industry established in the congested industrial area is slow to move to other places despite labour shortages and external diseconomies arising from the excessive agglomeration of industry and population, and invests more capital there instead). In advanced industrial countries the capital market is highly developed by big financial institutions with a nation-wide network of branch offices. They can easily obtain savings from all over the country and transfer them to any region where there are investment opportunities.

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(1) L.G. Reynolds and C.H. Taft, op. cit. p. 359.

(2) There are controversial theoretical issues about agglomeration economies and regional growth (See H.W. Richardson, op. cit. pp. 348-9).

On the other hand, labour is less mobile than capital (except fixed capital stock) for the reasons which we have mentioned. The rate of population growth is said to be lower in urban area than in rural area, though rural-urban differences in birth rates decline with the progress of industrialisation (1). Besides, in a country with a large agricultural population, there is relatively large underemployed labour force, or latent labour surplus in the rural area. (Even in mature industrialised economies there may arise labour surplus in regions with declining industries). Roughly speaking, labour supply pressures are positively related to the size of agriculture relative to industry in the region. (2).

Besides quantitative differences, there are qualitative differences in the distribution of the labour force between regions. Prosperous industrial regions more easily find highly qualified

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(1) Before the middle of the 1950's fertility in agricultural prefectures (e.g. 32.9 per 1000 population for Kagoshima, 42.4 for Aomori, in 1935) was higher than that in urban prefectures (e.g. 27.6 for Tokyo) but has fallen thereafter (e.g. 13.4 for Kagoshima, 20.3 for Aomori, and 15.6 for Tokyo in 1966). Incidentally, fertility in unemployment-stricken Northern Ireland (22.1 per 1000 population in 1968) is higher than other part of the country (18.3 for Scotland, 16.9 for England and Wales) (Source: Ministry of Welfare (Japan) and Registrar General (U.K.)).

(2) Ratio of Job Applicants to Unfilled Vacancies registered with Public Employment Security Offices (monthly average) in 1967:

Hokkaido	1.1 (20.0)	Hokuriku	1.2(28.0)	San-in	1.5(36.9)
Tohoku	2.9 (37.7)	Tokai	0.4(16.1)	San-yo	0.9(22.6)
Southern Kanto	0.7 (7.9)	Keihanshin	0.8(6.7)	Shikoku	2.0(31.2)
Northern Kanto	0.6 (36.7)	Kinki	0.7(24.8)		
Northern Kyushu	3.1 (23.9)	Southern Kyushu	4.2(41.5)		

Figures in ( ) represent farming population as percentage of total occupied by reion in 1968.

Source: Ministry of Labour (Japan) and Employment Status Survey.

manpower such as professional, technical and skilled workers (1). There seems to be a vicious circle in the allocation of capital and high-quality labour: in rural or depressed areas there are fewer investment and employment opportunities; capital flees to prosperous industrial areas for better opportunities; a low rate of investment depresses the level of demand for labour and the rate of productivity growth, which may result in higher unemployment and low wages; most mobile types of labour like professionals, scientists, engineers, etc., also leave for prosperous areas, which makes the region more unattractive for industry. On the other hand, the opposite takes place in prosperous industrial centres where 'growth' industries concentrate and afford ample opportunities for investment and employment. These centres absorb capital from other areas as well as within the region where they are situated. A high rate of investment creates more labour demand or raises productivity, depending on whether investments are labour-saving or demand-expanding. A continued high level of labour demand thus created eventually brings about labour shortages and general wage advances in the region concerned. Or increased labour productivity may result in wage increases, price reductions or higher profits, any of which may be a cause of greater demand for consumer's or producer's goods and for labour. Labour shortages induce further labour-saving investments and productivity continues to grow. Modern technology

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(1) The proportion of managers, administrative, professional, and technical workers in total labour force in the region in 1968 was 12.0 and 9.8 percents for Tokyo and Osaka and their conurbations respectively, as compared with 7.2 percent for Tohoku region and 7.4 percent for Shikoku (Source: Employment Status Survey).

requires highly qualified as well as semi-skilled labour. Abundant job opportunities and high wages attract such labour, which gives the receiving region further advantages in the composition of the labour force. The agglomeration of scientific talent may promote technical progress in industries in the region (1). And so on.

To sum up, in rural or less developed areas where 'growth' industries are absent a low rate of capital accumulation (and a low level of labour demand) and high labour supply pressures bring about low labour productivity, low wages and probably relatively high unemployment, while in prosperous industrial centres where 'growth' industries are located, a high rate of investment (and a high level of labour demand) and practical absence of labour surplus result in high labour productivity, high wages and labour shortages. Since the pace at which capital and labour migrate between regions differs, inter-regional wage differentials persist. As long as the effects of economies of scale and agglomeration in the existing industrial centres last, these areas continues to attract new industries, absorb capital and labour from other areas and grow. (2). But shortages of land, water and labour, traffic congestion, etc. resulting from an

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(1) See H.W. Richardson, op. cit. pp. 316 - 20.

(2) Among the benefits from economies of scale and agglomeration are high specialisation among the industries, the existence of related industries, better social overhead capital formations, easy access to a vast amount of information, capital and labour (especially, highly qualified labour), and so on. We have pointed out in the preceding chapter (p. 78) that the community wage level is positively related to its population size. There is an evidence that the labour market itself is more effectively operated in the regions with a large population (The rate of intra-regional migration (per 1000 residents) is generally higher in such regions (e.g. 92 for Southern Kanto with a population of 17.7 million, 79 for Keihanshin with 10.5 million inhabitants, as compared with 58 for Tohoku with 6.6 million and 6.9 for Southern Kyushu with 3.3 million (Source: Employment Status Survey). See T.H. Hollingsworth, op. cit. p. 32).

excessive congglomeration of industry and population will be serious disincentives to new firms and labour which are thinking of moving into those areas.

The inter-industry differences in the wage level are partly ascribed to differences in the composition of the work force by occupation, sex, age, geographical location of the industry, etc. Beyond this there seem to be genuine inter-industry differentials among similar types of labour. For example, if we take the starting wages of new school-leavers, they are higher in the generally high-wage industries like chemicals and metal manufacture than in the generally low-wage industries like textiles and clothing in Japan (1). Besides differences in the composition of the work force within the industry, other factors may be important. According to R.A. Lester, 'an industry tends to rank high in terms of hiring rates for male common labor when it has most of the following characteristics: value added by manufacturing per wage-earner hour is a large figure, labor costs are a low percentage of total costs, profit margins are high, and the industry tends to be dominated by a few large firms.' (2). L.G. Reynolds also pointed out as conditions for a high industry wage level: a low ratio of labour costs to total costs, a rapid rate of increase in man-hour output, a high ratio of profits to sales, and a high degree of output concentration in a few companies

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(1) The median monthly earnings of boys having recently completed junior high school ranged from a high of 20, 345 yen in chemical and allied industries to a low of 18,185 yen in textile and clothing industries in Tokyo in June, 1968. (Source: Tyokyo-to Labour Bureau).

(2) R.A. Lester, op. cit. p. 308.

and "cooperative" pricing arrangements (1). M.W. Reder maintained that 'high wage industries tend to be those characterised by large, well-financed corporations using a great deal of machinery per worker and operating a number of plants which are located mostly in large cities ...' (2). J.T. Dunlop and M. Rothbaum asserted that 'the technology of production and the nature of product market competition largely explain the ranking in the interindustry wage structure.' (3). On the other hand, after comparing the wage structure between five Western countries, L.G. Reynolds and C.H. Taft concluded that low-wage industries are '1. old industries which have passed their expansion peak and have a low rate of technical progress; or 2. small-scale and highly competitive industries with little control over prices and output rates; or 3. industries which employ relatively light and low-skilled labour, including a considerable proportion of women workers.' (4).

We may draw a conclusion from the remarks of these authors: the industry wage level is related to labour productivity, ratio of labour costs to total costs, profit margins, indus trial concentration, and the size of the typical firm in the industry. In this connection,

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(1) L.G. Reynolds, op. cit. p. 481.
(2) M.W. Reder, op. cit. p. 315.
(3) J.T. Dunlop and M. Rothbaum, "International Comparison of Wage Structure," International Labour Review (April, 1955).
(4) L.G. Reynolds and C.H. Taft, The Evolution of Wage Structure (1956), p. 357.

there have been many attempts by statistical methods to find factors affecting the industrial wage structure. The results of these studies have so far been conflicting. Some found that there was a good positive correlation between wages and labour productivity (1), while others negatived it (2). As far as Japanese industries are concerned, however, it has been shown that there is a strong positive correlation between the industry wage level and labour productivity measured in terms of value added (3). If we look at the relation between the rates of wage increase and productivity growth (output per employee) by industry, there is no definite relation between them for British industries but some negative correlation for Japanese industries (4). The rank correlation coefficient between the industry wage level and labour productivity measured in terms of value added has so far been higher for Japan than for some Western countries. But, if a negative correlation between industry wage increases and productivity growth continues to exist, the correlation between the industry wage level

(1) P.H. Douglas, Real Wages in the United States 1890-1926 (1930), pp. 98, 104, 562, 564. J.T. Dunlop, Wage Determination under Trade Unions (1950), Chap. 3. J.W. Garbarino, "The Interindustry Wage Structure," Quarterly Journal of Economics (May, 1950). R. Perlman, "Value Productivity and the Interindustry Wage Structure," Labor Relations Review, (Oct. 1956) p. 27.

(2) For example, S. Fabricant, Employment in Manufacturing 1899-1935 (1942), pp. 100-105; F. Meyers and R. Bowlby, "The Inter-Industry Wage Structure and Productivity," Industrial and Labour Relations Review (Oct. 1953); H.M. Levinson, "Postwar Movement of Prices and Wages in Manufacturing Industries," Study Paper, No. 21, p. 3.

(3) S. Yamada, "Sangyobetsu Chingin-kozo," Gendai-rodo-mondai Koza, Vol. 2 (Chingin-seisaka)(1967), pp. 135-6: the rank correlation coefficient between annual value added per employee and annual earnings per employee was 0.801 for Japan (45 industries in 1964), 0.75 for West Germany (33 industries in 1962) and 0.63 for the United States (57 industries in 1964); 0.84 in 1954 and 0.87 in 1959 for Japan.

(4) The coefficients of correlation between percentage increases in wages and output per employee over 1964-60 (for Japan, 1964-68) in 21 industries are 0.0016 (negative) for the United Kingdom and 0.2037 (negative) for Japan (See Appendix XV).

and productivity may become weaker, as in Western countries.

The relationship between wages and other factors is also rather inconclusive. There is some evidence of a positive correlation between industry wage movements and degree of output concentration or trade union density (1) but, here too, contradictory results have been obtained (2). Profits are said to be a significant variable accounting for industry wage movements (3). We showed in the preceding chapter that the average employment size of the establishment was generally larger in high-wage industries than in low-wage industries and yet that the wage level of establishments of any size tended to be higher in high-wage industries than that of establishments of the corresponding size in low-wage industries. This suggests that, although the size of firms in a given industry bears on the wage level of the industry, particular conditions of individual industries also influence the wage level. What are, then, the particular conditions characterising an individual industry? We tentatively suppose that they are the rate of change in demand for the industry's output and the nature of technology used in the industry (and the rate of technical progress there).

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(1) For example, A.M. Ross and W. Goldner, "Forces affecting the Interindustry Wage Structure," Quarterly Journal of Economics (May, 1950); J.W. Garbarino, ibid.; H.M. Levinson, ibid.

(2) For example, H.M. Levinson, ibid. (no correlation between union density and wage increases); J.T. Dunlop, ibid.; O. Eckstein and T.A. Wilson, "The Determination of Money Wages in American Industry," Quarterly Journal of Economics (August, 1962), pp. 379-414.

(3) O. Eckstein and T.A. Wilson, ibid.

Before setting about further discussion about this matter, we review the structure of labour market in relation to interindustry wage differentials. Apart from differentials based on differences in the composition of the work force by occupation, sex, etc., interindustry wage differentials presuppose imperfect labour mobility between industries. But this does not mean the existence of "industrial" labour markets. It is doubtful that the labour market is organised on an industry basis and fragmented industry by industry in terms of labour mobility. In fact, migration of labour between industries is more frequent than that within the industry (1). Of course, it is certainly true that some industry which employs many workers of a special type mainly required for its needs virtually monopolises a market for such labour, but it is "occupational" rather than "industrial". Imperfect inter-industry mobility of labour results from the fragmentation of the local market at the firm or plant level as well as occupational level. In this sense the conept of industry is essentially related to product markets and not to labour markets.

Individual firms in the same industry use more or less similar types of technology and are subject to the same product market. If we temporarily dismiss differences in skill proportions between industries, interindustry wage differentials primarily arise

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(1) Workers who changed jobs within the industry as percentage of all workers who were engaged in the industry at the beginning of the period and changed jobs during the period (1967/8) in Japan: Mining 17; Construction 34; Manufacturing 49; Destributive trades 35; Finance, insurance and property 16; Transport and communication 31; Services 32. Thus the greater majority of job-changers found employment in other industries. (Source: Employment Status Survey).

from differences in labour productivity and demand pressures. A high rate of technical progress produces a high rate of productivity growth, which would result in a fall in the price of the product concerned and an increase in employment under perfect comptition, given a fixed demand curve. Under imperfect competition, if demand for the product is increasing, it is quite possible for the firm in the industry to allocate improvements in labour productivity to wage or profit increase or both, while maintaining the present volume of employment as well as the present price of the product. On the other hand, when demand for the product is stable or decreasing, improvements in labour productivity would result in a fall in employment if the firm tries to maintain the present price and wage level, or in a fall in the price of the product if it tries to maintain the present level of output and employment. Although there is no obvious reason why a high rate of technical progress and a high rate of demand expansion concur in some industries, this has actually happened in a technologically advanced industries, such as chemicals and engineering, while other industries like textiles and leather goods have suffered a slow rate of technical progress and stagnant demand (1). Many types of modern technology require investments in large lumps which well-financed, large firms only can afford to take the risk of carrying out. Given the size of the national economy, as we have seen in Chapter 2, the type of technology determines the structure of product market. The industries based on those types of technology will inevitably be

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(1) See Appendix II.

oligopolistic. As shown in the table below, the oligopolistic market structure is clearly related to the industry wage level rather than industry wage increases. In oligopolistic industries save non-ferrous

Table 5 - 3

Industry group	Ouput: rate of increase,	Output per employee: rate of increase	Ouput concentration: level, 1966	Wholesale price: rate of increase	Employment: rate of increase	Wages: rate of increase
	%	%		%	%	%
Petroleum & coal products	27.3	29.3	++	- 5.8	00	30.3(2
Metal goods	10.4	- 0.3	-	2.7	10.9	42.4(8
Chemicals	6.4	12.2	++	- 5.0	- 5.2	29.6(4
Machinery	6.1	2.9	++	- 4.3	3.1	36.4(6
Food	5.7	- 0.7	+	3.8	15.8	35.1(9)
Iron & Steel	- 6.0	4.0	++	-10.1	- 7.6	33.1(1)
Timber	- 5.3	-10.4	-	24.2	5.8	38.4(10
Pulp & paper	-10.2	- 7.9	+	5.5	- 2.5	30.9(5)
Brick, pottery	-10.0	- 11.7	+	7.5	0.6	37.6(7
Nonferrous metals	-16.3	- 4.3	++	7.9	-12.7	33.5(3
Textiles	-21.1	-10.4	-	1.3	-12.0	36.5(11

Note:- 1. The rates of increase are percentage increases over 1960-65.
2. The industry rates of increase in output, output per employee, wholesale prices, and employment are those relative to the overall rates of increase for the whole manufacturing industry (which were 71.5%, 39.6%, 2.1%, 34.6% respectively).
3. The signs ++, +, and - in output concentration represent a 'very high', 'high', or 'low' concentration level respectively.
4. The parentheaised figures represent the ranking of industry by wage level in 1960.

Source: Ministry of International Trade and Industry, Bank of Japan, Ministry of Labour, and Fair Trade Commission.

metals, a greater labour productivity growth resulted in a fall in product prices and relatively stagnant or reduced employment but not in higher wage increases, although in machinery, which is an fairly labour-intensive industry, somewhat greater wage and employment

increases ensued from slow productivity growth and a high level of demand. Slow productivity growth in less oligopolistic industries was accompanied by increases in prices, employment and wages. If we look at the matter from the demand side, the effect of a high level of demand for petroleum and coal products, being offset by large improvements in productivity, was only felt in the fairly stable employment level of these industries; a high level of demand for metal goods and processed food, combined with slow productivity growth, brought about increases in employment, wages and prices; slower demand increases were accompanied by slower productivity growth except for iron and steel but their combined effects on prices, employment and wages differ, depending on their rate of increase relative to the other. Two things to add are: the rate of productivity growth is higher in oligopolistic industries; and the rate of wage increase is higher in the lowest-wage than in the highest-wage industries. We may tentatively conclude from these observations that (i) a high wage level and a high rate of productivity growth are associated with oligopolistic industries; (ii) with exceptions, a high rate of productivity growth is associated with slower than the average increases in prices, employment and wages; (iii) when the rate of demand expansion exceeds that of productivity growth, increases in prices, employment and wages result: (iv) with exceptions, a low rate of demand expansion is associated with a low rate of productivity growth; (v) a high rate of wage increase is generally

related to a low wage level and vice versa. (1) The last point may be better accounted for by labour shortages than otherwise: employers in low-wage industries were obliged to raise wages so as to retain workers. As these industries had a low rate of productivity growth and a low level of industrial concentration, their industry wage level was depressed when labour was abundant. Labour shortages forced it up and consequently the prices of their products, because of a low rate of their productivity growth, though in the case of metal goods and food a high level of demand for them, coupled with labour shortages, brought about increases in both wages and employment.

The table below shows movements in output, labour productivity, prices, employment, and wages, the level of industrial concentration, and the ranking of industry by wage level, in British industries. We find some similarities to the Japanese case: (i) a high rate of output expansion is associated with a high rate of productivity growth and vice versa; (ii) although not so clear as in Japanese industries, a high wage level and a rate of productivity growth are associated with oligopolistic industries; (iii) when the rate of output expansion exceeds that of productivity growth, increases in employment - but not always in prices and wages, unlike the Japanese case - result, or

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(1) The coefficients of correlation are 0.6789 for industry wage levels and rates of productivity growth (r.p.g.); 0.6405 (negative) for r.p.g. and rates of wholesale price increase; 0.5592 (negative) for r.p.g. and rates of change in employment (excluding demand-stagnant industries like pulp and paper, non-ferrous metals, textiles, etc.); 0.5253 (negative) for r.p.g. and rates of wage increase; 0.7973 for r.p.g. and rates of output expansion; 0.6048 (negative) for industry wage levels and rates of wage increase.

Table 5 - 4

Industry	Output: rate of increase	Ouput per employee: rate of increase	Output concentration: level, 1958	Wholesale price: rate of increase	Employment: rate of increase	Wages: rate of increase	
	%	%	%	%	%	%	
Chemicals	35.9	33.6	++	6.3	17	40.0	(5)
Gas, Electricity, and water	N.A.	32.4	++	24.1	N.A.	28.1	(15)
Engineering & electrical goods	32.4	27.1	++	15.2	4.2	35.7	(8)
Textiles	N.A.	29.9	-	8.8	N.A.	39.0	(13)
Other manufacturing	26.0	14.4	N.A.	N.A.	10.1	37.3	(7)
Food, tobacco & drink	16.0	17.1	+	14.1	- 0.9	39.8	(12)
Vehicles	N.A.	14.6	++	1.0	N.A.	36.8	(1)
Paper, printing & publishing	12.3	10.2	-	15.9	2.4	38.4	(2)
Transport & communication	12.3	19.5	N.A.	21.2	- 6.0	44.6	(6)
Brick, pottery, etc.	10.7	15.4	+	N.A.	- 4.1	36.4	(9)
Construction	6.3	16.5	-	20.6	- 8.3	38.5	(11)
Metal goods n.e.s.	4.6	4.2	+	17.0	0.4	37.0	(10)
Metal manufacture	N.A.	8.1	++	11.7	N.A.	36.3	(3)
Miscellaneous services	2.0	5.2	-	33.9	- 2.2	37.6	(18)
Clothing & footwear	- 1.5	7.7	-	10.1	- 8.5	34.0	(17)
Timber, etc.	- 2.7	- 1.5	-	18.4	- 1.2	33.0	(14)
Leather & fur	- 8.7	1.4	-	N.A.	-10.0	29.5	(16)
Shipbuilding	-11.6	- 2.1	+	N.A.	- 9.7	43.1	(4)

Note:- 1. The rates of increase are percentage increases over 1964-69.
2. The signs ++, +, and - in output concentration represent a 'very high', 'high', or 'low' concentration level respectively.
3. The parenthesised figures represent the ranking of industry by wage level in 1969.

Source: National Institute Economic Review, No. 55 (1971) and Employment and Productivity Gazette.

when a fall in production is accompanied by slow productivity growth, employment also declines. On the other hand, a higher rate of wage increase was related to a higher industry wage level; the rates of increase in industry wage levels and wholesale prices were almost independent of those of productivity growth (1). This would suggest that the mechanisms of wage and price determination are quite different between Britain and Japan. In short, the Japanese market structure is nearer to a competitive model than the British counterpart, in many ways. We shall enlarge upon this matter in the next section.

Although different students have drawn conflicting conclusions about the causes of inter-industry wage differentials, the coverage of their studies was mainly limited to advanced industrial economies or different time periods of these economies, which were characterised by the development of mass trade unionism, a relatively small proportion of agricultural population, and tendency towards full employment. In a less developed country with a large proportion of agricultural population (which is a main source of persistent underemployment) and a small proportion of employee population in the modern sector, the impact of trade unionism on the national economy as a whole would be negligible, so that we may fruitfully explore basic economic forces producing wage differentials. H.A. Turner and D.A.S. Jackson suggest that, although the wage level of manufacturing industry and that of other non-agricultural sectors went

(1) The coefficients of correlation are 0.9083 for rates of change in output levels and productivity; 0.3526 for industry wage levels and rates of productivity growth; 0.5886 for industry wage levels and rates of wage increase; 0.0016 (negative) for rates of productivity growth and wage increase.

up together, there was no such relation between manufacturing and agricultural wage movements, and that the inter-industry dispersal in rates of wage increase was much greater in less developed countries (1). In the next section we shall attempt to analyse wage dispersion in Japan as an example of the wage structures of developing countries and its narrowing process which took place in the last ten years or so, in the light of the experiences of Britain and other mature industrial countries.

4. Dynamic Process of Narrowing Wage Differentials

In the preceding section we have discussed the underlying causes of wage differentials. We shall now attempt to explain, in the present section, actual movements in wages in the light of the hypotheses put forward. The most prominent and prevailing feature of wage movements in recent years is the secular rise in wages accompanied by wage levelling, which many labour economists have pointed out so far. For example, L.G. Reynolds and C.H. Taft, comparing the wage structures of five Western countries including Britain, pointed out that 'most types of differentials in most countries have declined in percentage terms since 1930. The shrinkage has been particularly marked in the case of occupational and interindustry differentials, less striking in the case of geographical and male-female differentials.' (2). The phenomenon of shrinking wage differentials is not particularly limited to advanced industrial countries. 'In

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(1) Op. cit. pp. 827-45.
(2) L.G. Reynolds and C.H. Taft, The Evolution of Wage Structure (1956) pp. 352-3.

recent years there has been a general tendency towards narrowing down of inter-industry relative wage differentials, in most of the countries irrespective of their levels of industrialisation.' (1) And we mentioned in the preceding chapter that in Japan most types of differentials had also narrowed in the 1960's.

We have two major questions to answer: why wage dispersion is wider in Japan than in Britain, or more fundamentally, why some countries such as the United States, Canada, and India have wider wage differentials than others, (2) and what forces have operated in the narrowing of wage differentials. Generally speaking in less developed countries which are in process of industrialisation there are wider wage differentials than in mature industrial countries (3). Among the developed or less developed group, however, the range of wage differentials differs considerably from one country to another. Even within a given country the range of wage dispersion varies from one region to another: it is usually narrower in urbanised, industrial

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(1) T.S. Papola and V.P. Bharadwaj, "Dynamics of Industrial Wage Structure: Inter-country Analysis," The Economic Journal Vol. LXXX No. 317 (1970), pp. 89-90.

(2) According to L.G. Reynolds and C.H. Taft, 'differentials are widest in Canada and the United States, narrowest in France. Britain and Sweden are in an intermediate position but rather closer to the French level.' (ibid). V.N. Kothari showed that occupational wage differentials were far wider in India than in the United States or elsewhere ("Disparities in Earnings Among Different Countries," The Economic Journal. (September, 1970), pp. 605-7).

(3) T.S. Papola and V.P. Bharadwaj, ibid. According to an ILO's survey on occupational wages, wage differentials are wider in Japan than in other East Asian countries; wider in these countries than in Western countries; wider in the United States than in European countries; wider in Britain than in West Germany and Italy (R. Magota, "Chingin-kanri no Kokusai-hikaku", in Gendai Rodo-mondai Koza (1966), Vol. 3, pp. 244-5).

areas than in rural, half-industrialised areas (1).

In less developed countries which are at an early stage of industrialisation there is large labour surplus (usually in the form of underemployment rather than unemployment (2)) in both urban and rural areas, while capital funds are short and skilled labour of the types which modern technology requires, scarce. Modern industries tend to concentrate, usually in the urban area, for the amount of capital these countries can afford is very limited. As such industries grow, demand for skilled labour increases. Since it is difficult to expand the supply of such labour rapidly in the short run, shortages develop and with these, wider wage differentials between it and other types of labour. Growing modern industries require investment in large lumps because of indivisibilities and absorb a large part of what scarce capital the country can afford, while in traditional industrial sector as well as agriculture capital formation is very slow. Consequently differences in labour productivity between sectors increase and so do inter-sectoral wage differentials. Moreover, industry in developing countries usually has a wider choice in production techniques, either labour-intensive or labour-saving, than the counterpart of industrialised countries because the latter is often compelled by labour shortages or international competition to adopt the most advanced type of technology.

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(1) For example, the mean coefficients of variation in interindustry wage differentials within the region are much smaller in urban areas (15 for Kanagawa, 17 for Osaka, 20 for Aichi) than in rural areas (32 for Yamagata, 30 for Aomori, 39 for Shimane, 40 for Saga and 36 for Kagoshima) in Japan (Source: Yearbook of Labour Statistics). Wage differentials by skill or by size of establishment are larger in the South and Border States than in the Pacific and Great Lakes regions (R.A. Lester, "Pay Differentials by Size of Establishment", Industrial Relations, vol. 7 (1967-68), pp. 57-67. Also see L.G. Reynolds, op. cit., p. 467).

(2) For the explanation of this matter, see p. 205 in Chapter 8).

Where there is large labour reserve, small firms using labour-intensive methods are viable by depending on cheap labour and can compete with large firms (which use more labour-saving methods and employ more expensive types of labour), so that the former have not so much incentive to substitute cheap labour with scarce and costly capital as small firms in advanced industrial economies where labour is relatively dear. Differences in labour productivity between small and large firms may widen if the latter continue to absorb a large part of the capital funds available in the country concerned. As a result, large firms enjoy further surplus profits and pay high wages to their employees, while small firms are content with modest profits and to pay low wages to their employees, who are easily available from labour reserve. This is one of the main causes of a "dual structure" of developing economies. In these economies, however, rural-urban wage differentials are probably more critical. Technologically advanced industries usually grow in urban areas and absorb labour surplus there. As the urban economy develops, the income levels of inhabitants in general as well as employees working in those industries rise (1). If labour moved swiftly from rural to urban areas where demand for it is greater, rural-urban differences in income level would contract rather than widen. Farmers are one of the least mobile

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(1) For theoretical analysis on this matter, see H. W. Richardson, op. cit. pp. 176 - 85.

occupational groups (1). Besides poor transport and communication facilities, social and cultural barriers such as localism, tribalism, differences in styles of living, etc. are more important obstacles to labour mobility in less developed countries than in advanced industrial countries. In brief, the labour market is more fragmented and less developed in underdeveloped countries so that, once new industries take off in urban areas, wage differentials between these industries and traditional sectors, between skilled and unskilled workers or between urban and rural areas also start widening. The continued emergence of new industries brings about further widening of wage differentials, unless labour mobility and the supply of skilled labour increase rapidly.

Incidentally, as mentioned earlier, distance affects labour mobility. Given a level of transport and communication facilities, the range of inter-regional wage differentials tends to be wider in a country with a large area on which population is scattered, like the United States and Canada, than in a small, densely populated country. The same analogy is true about regions within a country.

Apart from the effects of statutory minimum wages and trade unionism, factors contributing to the narrowing of wage differentials are improved labour mobility, increased supply of scarce

(1) See T.H. Hollingsworth, op. cit., pp. 53-64. In Japan, although the labour force engaged in agriculture decreased rapidly during the last decade, the number of farm households remained fairly stable, which means that, despite falling incomes from farming relative to those from other occupations, the majority of the Japanese farm households would not abandon what small holdings they possessed nor leave for industrial areas (though it is to be noted that many farming areas are close to industrial centres and employment in industry and service is accessible to farm households without changing addresses there).

types of labour and capital, and technical change. Given a savings ratio, the amount of capital funds available for investment increases with a rising level of national income. A greater amount of capital funds makes possible more extensive investments in various industries in different regions, instead of intensive investments in a limited number of modern industries as at early stages of economic development. The shrinkage of differences in labour productivity between firms, between industries or between regions may result. The supply of skilled labour increases as public education becomes more widely diffused. A typical example of this is the secular decline in the relative position of clerical workers because literacy is no longer a privilege for the middle or upper classes in industrialised countries. Public education also contributes to the assimilation of young people from different social classes or different parts of the country and thus the gradual elimination of social and cultural obstacles to labour mobility. The dissemination of urban styles of living in rural areas makes farmers aware of need for cash and job opportunities available in urban areas. The improvement of transport and communication media no doubt facilitates the diffusion of market information and the migration of labour between regions. Technical progress in our time has been such that in modern industries the field of white-collar occupations like management, professionals, technical and clerical workers expands, while manual work requiring craftsmanship or mere muscular strength is replaced by work requiring less manual dexterity but more intellectual qualities (which results in blurring the

traditional boundary between manual and nonmanual work)(1). Generally speaking, this has favourably affected the wages of female or manual workers relative to those of male or nonmanual workers. Besides, government policies such as the set-up of a nation-wide network of public employment services and regional development programmes may be conducive to the reduction of inter-regional wage differentials.

Such policies will, however, be less effective where there are general and persistent labour surplus and an absolute shortage of capital (2), than where labour is short and capital, abundant. Although the diffusion of popular education is one cause of contracting occupational (skilled-unskilled, manual-nonmanual, etc.) or male-female wage differentials, it does not seem to contribute much to the narrowing of other types of differentials. The most important factor inducing the shrinkage of wage differentials is a general shortage of labour (3). A general labour shortage hits hardest the lowest reaches of the community's wage hierarchy: unskilled labour, low-wage industries, small firms depending on cheap labour, and so on. For employers can cope with a shortage of skilled labour, within given limits, by introducing "dilutee"

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(1) For the analysis of the nature of modern technology and its effects on labour, see G. Friedmann, Industrial Society (1955), Part 2.

(2) Since capital investments are not infinitely divisible, labour surplus cannot be eliminated completely where capital is absolutely short.

(3) There is 'a certain inverse connection between the general level of employment and that of relative differentials.' (H.A. Turner, "Inflation and Wage Differentials in Great Britain," in The Theory of Wage Determination (1957) edited by J.T. Dunlop, pp. 123-35. Also see M.W. Reder, "The Theory of Occupational Wage Differentials" American Economic Review, Vol. 44 (1955), pp. 833-52.

labour (1), or varying hiring standards (2), or training employees of a lower grade. Workers shift from agriculture to unskilled jobs in industry, from unskilled to semi-skilled jobs in industry, from unskilled to semi-skilled jobs, or from low-wage to high-wage industries, or from small to large firms. After exhausting the existing labour surplus, however, there will be no more workers available for job vacancies of the most unattractive type. Then the wages for these types of labour start rising at a pace more than proportional to that for other types, for there is no reason for employers, who can still recruit from among the former types of labour to fill vacancies for the latter by lowering hiring standards or otherwise, to raise their wage level more than the average, while they are obliged to put up the wages for the former types of labour more than the average so as to prevent them from leaving for other more attractive jobs. If demand continues to expand, however, a similar process affects all types of lower-wage labour so that the narrowing of wage differentials may eventually be very general, involving not only occupational but also interindustry, inter-firm and inter-regional differentials. Since this process is the pulling up of low wages rather than the pulling down of high wages towards the average, downward spread in wage distribution contracts, while leaving upper spread more or less intact. Wage levelling will not proceed so far as for all differentials to disappear, but will stop when the range of differentials becomes so narrow that it will not give workers any more incentive to move from one job to another or from

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(1) L.C. Hunter and D.J. Robertson, op. cit. p. 496.

(2) M.W. Reder, op. cit.

one region to another.

We have so far ignored the effects of trade unionism and statutory minimum wages on wages differentials. This can be justified about countries where trade unionism and statutory minimum wage system are still in their infancy. But they cannot be overlooked in countries with a well-developed, centralised system of collective bargaining, such as Britain and other Western countries (1). H.A. Turner ascribed the narrowing of wage differentials to the growth of mass trade unionism rather than to full employment, diffusion of public education, or technical change, and asserted that '.... trade unions prefer to demand equal wage advances for all their members: mass trade unionism has, on the whole, chosen to demand increases which are equal in absolute terms. The general preference for such 'flat-rate' increases has been the first cause of the narrowing.' (2) On the other hand, some trade unions or some groups of workers (e.g. skilled labour, time-workers versus piece-workers) are particularly keen to maintain "established relativities" or "customary differentials" so that, if a general wage advance is obtained by trade unions, sectional demands for wage increases follow so as to restore "established relatives". If a trade union affiliates different types of labour, as is the case with large British unions, it tends to prefer

(1) L.G. Reynolds and C.H. Taft mentioned, after comparing the United States, Canada, Britain, France, and Sweden, that 'it is suggestive that the decline in differentials was greatest in those countries where wage determination is most highly centralised, and least in those countries where wage decisions are very decentralised.' (op. cit. pp. 352-3).

(2) op. cit.

uniform cash advances among its members because discriminatory wage demands are often a source of internal friction between members. And in such a trade union skilled workers are outnumbered by less skilled workers so that its choice of the form of wage demand, more often than not, leans to general wage increases for all affiliated members. If a trade union wants to stick to the principle of "coercive comparison", or advance the interests of a particular group or groups of workers ahead of those of other trades or unskilled labour in general, it must be exclusive or restrictionist in its membership. Typical trade unions of such a type are relatively small craft unions which still survive, despite the general tendency towards merger and general unionism (as against craft unionism), in present-day Britain (1). Although uniform wage increases advanced by mass trade unionism were supposed to have brought about the narrowing differentials for British workers, the existing system of established relativities was said to have been taken as given by trade unions and government agencies, such as arbitration tribunals, conciliation services and legal wage boards, in more recent years (2). But, on the whole, we do not know for certain whether the halt or reversal of the narrowing trend after the middle of the 1950's in Britain (3) was due to the revived drive for the maintenance of established relativities or the attainment of a system of equilibrium differentials which would naturally come as a result of adjustments by market forces. Only we can say with some certainty that full employment, diffusion of

(1) H.A. Turner, "Trade Union Organization," Political Quarterly, Vol. 25, (1955) pp. 57-70.
(2) H.A. Turner, op. cit. pp. 123-35.
(3) L.C. Hunter and D.J. Robertson, op. cit. p. 131.

popular education, technical change, development of mass trade unionism, and statutory minimum wage system have all worked in the same direction to bring about the contraction of downward spread of the British wage distribution.

The far wider wage differentials in Japan are essentially a reflection of greater disequilibria in the distribution of labour and capital (including technology) among the regions, industries and firms that have been caused by a rapid and unbalanced sectoral growth of the economy. More specifically, in Britain with a small proportion of agricultural population the degree of industrialisation is relatively homogeneous over the country, though the industry mix differs considerably from one region to another (1), where Japan has a relatively large agricultural population which is unevenly distributed among various regions (2). Roughly speaking, the regional wage level is inversely related to the size of agriculture relative to industry in the region concerned. Among other things, the difference in labour productivity between agriculture and non-agricultural industries is remarkably larger in Japan than in Western countries, because the average productivity of the Japanese farmer is extremely low, as compared with that of manufacturing workers which does not differ

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(1) See J. Tumelty, Britain Today (1969), pp. 67-123.

(2) See Footnote (2) on page 106.

very much from, say, that of their British counterparts (1). There were 16 million farmers (nearly 40 per cent of total working population) in 1956, which diminished by nearly 0.5 million annually to 10 million (about 20 per cent) in 1968) (2). This implies that a vast amount of unskilled labour flowed from agriculture into industry during the last decade. Besides, more than one million school-leavers mainly entered industry and about one third of them migrated to urban areas, every year during the same period. Production in manufacturing increased at the average annual rate of 15 per cent between 1955 and 1969. The share of agriculture, forestry and fishery in net national product fell from 22.7 per cent to 11.7 per cent and the share of manufacturing industry rose from 22.3 per cent to 28.9 per cent during 1955-67 (3). Above all, the importance of chemical, metal and engineering industries increased markedly (4). Rapid and great changes in the industrial structure originally created wide differences in labour productivity, wages and profit rates between leading 'growth' industries like chemical, metal and engineering industries and slow-

(1) The average productivity of British farmers was nearly three times as high as that of Japanese farmers, while in manufacturing the average productivity of British workers was only 17 per cent higher than that of Japanese workers, in 1967/68. (The average productivity of Japanese workers at big manufacturing firms is no lower, but sometimes higher, than the British counterpart. The problem of low productivity mainly concerns agriculture and small firms in other industries. For example, the percentage differences in labour productivity between the United States and Japan (favourable to the former) were 111 for workers employed at establishments with 1000 employees or more and 461 for workers employed at establishments with 1-9 employees). (Source: Rodo-hakusho (1969)).

(2) Source: Prime Minister's Office, Labour Force Survey.

(3) Source: Economic Planning Agency, National Income Statistics.

(4) The share of these industries in total value added by manufacturing rose from 55.3 per cent in 1955 to 66.3 per cent in 1967 (Source: Ministry of Industry and International Trade).

growing industries, between expanding and declining firms, and between developing urban areas with many 'growth' industries and underdeveloped, rural areas without any such industries. But abundant labour supply made it possible for low-wage industries or firms within a given industry to survive without raising wages as much as leading industries or firms in an industry did. This was especially so when the economic boom got under way in the 1960's. Underemployed farmers were willing to snatch at any job opportunities available in industry for low wages. The spread of urban styles of living in the rural area aroused the desire of rural people for cash incomes. In the beginning they sent out their sons and daughters to cities for employment in industry and services but later even heads of farm household came to leave farming to their wife or old parents and go to industrial centres for seasonal employment. As a result of the continued economic growth, labour shortages or recruitment difficulties were first felt by small firms in low-wage industries in the urban area and then spread to larger firms and less developed areas. Among other things, small firms had to compete with large firms in high-wage industries for new school leavers who were the cheapest but most flexible and mobile type of labour. As job vacancies began to outnumber in a great measure those school leavers who were seeking employment in industry and services (though other types of workers still had more or less difficulty in obtaining jobs until recently), in the beginning of the 1960's, small firms found it increasingly difficult to hire these school leavers at low wages. (1)

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(1) See p. 213 in Chapter 8.

More and more school leavers flowed from rural to urban areas and entered higher-wage industries and services and large firms (1). Two consequences followed from this phenomenon: (i) the rates of increase in the starting wages of school leavers began to outpace that in the general wage level, which naturally contracted differentials between juveniles and adults; (ii) differences in the starting wages of school leavers between regions, between industries, between firms, and between boys and girls narrowed (2). That did not end there. These rapid and large rises in the starting wages of school leavers, as will be discussed in the next chapter, had a profound effect on the whole wage structure of Japanese industry.

By the late 1960's a general labour shortage became apparent in the Japanese economy. We cannot say much about labour shortages in Japan from unemployment data, for unemployment rates have, for special reasons (3), always been very low by Western standards (4). There are however, other indicators. First, as we have seen in the preceding chapter, a wage explosion has developed in the latter half

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(1) For example, out of 250,000 school-leavers who completed junior secondary school, 80,000 (about 33 per cent of the whole) migrated from their home region to other regions in 1969. The ratios of job vacancies filled by school-leavers are much higher at large firms than at small firms (Source: Ministry of Labour).

(2) For example, the annual rates of wage increase for boy school-leavers in 1960, 1961, and 1962 were 16.2%, 22.8% and 23.0% respectively, which were well above those for other workers (4.9%, 9.4%, and 10.2%). (Source: Ministry of Labour).

(3) See p. 205 Chapter 8.

(4) The unemployment rate in Japan was 1.9% in 1953 and 1.1% in 1969 (Source: Ministry of Labour).

of the 1960's. Second, job vacancies for workers other than school leavers also began to outnumber job applicants at Public Employment Security Offices (1). Labour shortages have been particularly acute in semi-skilled and skilled production trades (2).

Although the general labour shortage has been caused by rapidly expansing demand for labour, two other factors have contributed towards intensifying it: (i) an increasing proportion of school leavers go to higher education (3) so that the time of their entry into the labour force is postponed; (ii) the sources of labour supply from agriculture have been exhausted (4). The effects of labour shortages are that they tend to increase not only migration from agriculture to industry or from rural to urban areas but also the mobility of the existing labour force in industry, between industries and between firms

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(1) The ratios of job applicants to vacancies were about 1.5 before 1966 but below one thereafter, i.e. there were more vacancies than applicants (Source: Ministry of Labour).

(2) That number of workers of these types which industry needed increased from 1.3 million in 1962 to 1.8 million in 1969 and the shortage of them was most acute among the smaller firms (Source: Ministry of Labour).

(3) The proportions of school leavers who went to high school and to technical college or university rose from 51.5 and 18.4 per cent in 1955 to 74.7 and 23.7 (for universities only, 17.8) percents in 1967 respectively. These figures are relatively high by European standards (for example, the proportions of school leavers who went to senior secondary school and to university in Britain were 49.9 and 9.8 per cents respectively in 1966) (Source: Ministry of Education).

(4) Out of about 10 million farmers still remaining on the land in 1968, one third did not work full time in farming but among the full-time farmers, 60 per cent were female and again more than 60 per cent of all farmers were aged 40 and over (Source: Ministry of Agriculture and Forestry).

within a local market (1). The result is, as we have seen in the preceding chapter, the narrowing of all types of wage differentials in Japan in recent years. At the same time the rates of wage increase have not only increased but also become more and more uniform among various types of workers, industries, firms, and regions (2). In these circumstances there have been important developments in the Japanese collective bargaining system, which we shall discuss in Chapter 7. These phenomena have aroused much concern among economists, business managers and government policy-makers in relation to price movements, particularly with regard to the question of whether the increased linkage between wage movements in different sectors is due to the improved operation of the labour market or the increased centralisation of the collective bargaining system.

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(1) For example, the number of job-changers having moved between firms increased from 764,000 in 1964 to 832,000 in 1969 (Source: Ministry of Labour).

(2) See p. 188 in Chapter 7.

CHAPTER 6

INTERNAL WAGE STRUCTURE AND LABOUR COSTS

If all wages are determined in the external market, there is no room for wage administration by management, nor any need of examining the internal wage structure of companies because it merely reflects the skill mix of the workforce employed by them. And inter-firm wage differentials in the same local market are ascribed to differences in skill proportion between firms. In the real world, however, they cannot be accounted for solely by differences in skill mix between firms. In other words, different firms in the same local market pay different wages to workers of an identical occupation and, what is more, the relative position of a given occupation in the internal wage hierarchy varies from one firm to another (1). This fact implies that an individual firm has a considerable degree of discretion over its internal wage structure and methods of wage payment. It is known that wage drift often arises from wage administration by management and wage bargains at the plant level in Britain and other Western countries with a centralised system of collective bargaining. (2). In Japan, the concept of "wage rates" is not used in practice nor negotiated in collective bargaining (3) so that no problem of wage drift arises in the sense that actual earnings per hour or week exceed nationally agreed wage rates. But a similar problem has arisen from steep increases in the wages of young workers.

(1) See, for example, D. Robinson and W.M. Conboy, "Wage Structure and Internal Labour Markets", in Local Labour Markets and Wage Structure (1970), edited by D. Robinson, pp. 238-45.

(2) E.H. Phelps Brown, "Wage Drift", Economica, vol. 29 (1962), pp. 339-56.

(3) In Japan, the "base wage" is a matter of negotiation, instead (See p.189 in the next chapter).

Since the system of age differentials has been maintained fairly rigidly by management, or under pressure of trade unions, in Japan, large advances in the wages of young workers tend to induce upward drift in the wages of older workers so as to maintain the established relativities based on age or length of service (1).

Labour costs do not only consist of wages directly paid to workers but also include fringe benefits, costs of recruitment and training, etc. In recent years the latter tend to rise faster than wages do partly because of labour shortages and thus cause upward drift in labour costs, independently of wage advances. When we talk about rising labour costs, therefore, it is also important to know which constituents contributed to the particular increases in labour costs. Moreover, trade unions are not concerned in the determination of all constituents of labour costs nor even in all components of wages.

1. Internal Labour Market

The pattern of internal labour market structure and the company wage level relative to the (external) market wage level bear on the pattern of internal wage structure and methods of wage payment. If the internal market of a given company is very much isolated from the external market, as in Japanese large firms, or if the company wage level is considerably higher than the market wage level, management can have wide choice in the type of internal wage structure

(1) It is pointed out that "pure drift" which is not due to national negotiations could occur within any internal wage structure at British firms as well. (See S.W. Lerner, J.R. Cable, and S. Gupta (eds.), Workshop Wage Determination (1969), p. 248.

and methods of wage payment. For management need not take so much account of the market wage rates but can determine individual wages at whichever level they like, as far as the wages so determined are not lower than those determined in the external market. Of course, the direction of management in the determination of these matters may be restricted to some extent by trade unions or by their own consideration that alterations in customary relativities between their employees may engender discontent among the unfavourably affected groups of workers.

The types of the internal market may differ from one firm to another. The main characteristics of the internal labour market structure are determined by the company's policy concerning recruitment, promotion and training. Some firms may only hire, as a rule, unskilled labour at the lowest grade from the external market and fill all vacancies for higher grades by promotion from within. Other firms may have an internal labour market which is highly compartmentalised or stratified occupation by occupation but has many "ports of entry" open to the external market, so that recruitment is direct into each occupation in the external market and there is little opportunity for promotion or internal labour redeployment within the firm. We have called the first type of internal market "closed-type" and the second type "open-type" in the preceding chapter. A pure form of either open-type or closed-type internal market is rare in reality. Most firms usually recruit only for a limited range of skills from the external market,promoting or redeploying "insiders" wherever

possible. Some opportunities for outsiders do, however, remain because some types of labour are difficult to obtain by internal training or promotion and "promotion from within" has several disadvantages as well as advantages (1). One of the disadvantages for small or medium firms is that the maintenance of long-term company training programmes is often too costly for them. Some of them, therefore, find it more convenient to pool their funds and organise training courses for their employees on an industry basis. But in that case it is very difficult for firms to "lock" trained employees in the internal market. Internal training and promotion from within are essential to a closed-type internal labour market.

The internal labour market of many Japanese large firms is typically of the closed type (2). These firms mainly recuit new school leavers and university graduates for key jobs, or jobs leading to higher key grades later, and give them internal training of the required type. (3). These "in-bred" employees have entered the firm under a tacit mutual understanding that they commit themselves to the latter throughout their life-time until they reach an age of

(1) J. Valerie Grant and G.J. Smith, Personnel Administration and Industrial Relations (1969), pp. 62-3.

(2) For further information on this matter, for example, see M. Tsuda, "Japanese Wage Structure and Its Significance for International Comparisons", The Changing Patterns of Industrial Relations (1965), pp. 203-14.

(3) New school leavers and university graduates accounted for about 43 per cent of the new recruits at firms with 500 employees or more, while the proportion was 11 per cent at firms with 5-29 employees in 1968. More than 90 per cent of the firms with 1000 or more employees gave their employees some form of training at their expenses and two thirdsconducted company training, while over 40 per cent of the firms with 30-99 employees provided some form of training and only 18 per cent carried out company training during 1967 (Source: Ministry of Labour).

compulsory retirement (55 at most firms) (1). As regards the recruitment of workers other than these school leavers and university graduates, many large firms have adopted a restrictive hiring policy based on age and try to avoid hiring such workers, particularly for key skilled or clerical jobs (2). Promotion channels are usually established separately for middle-school and high-school leavers, and university graduates. Promotion is awarded mainly according to age or length of service after allowing for merit, past performance, etc. Within the internal hierarchy of a given company there are two separate substructures - the white-collar and the blue-collar (3). Promotion ladders are separately established for each substructure so that vertical mobility is quite possible within it but mobility between the two structures is rare. In Japanese large firms, moreover, three such substructures are separately formed for clerical and administrative jobs, technical grades, and manual grades (4). The skill acquired by

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(1) Almost all firms with 500 employees or more had a compulsory retirement system for their employees, while a half of the firms with 30-99 employees had not, in 1967 (Source: Ministry of Labour).

(2) A discriminatory hiring policy based on age was practised for clerical and technical jobs by more than 50 per cent of the firms which hired workers other than school leavers and university graduates, and for sales or production-line jobs by 60 per cent during 1968 (Source: do.).

(3) See D.C. Miller and W.H. Form, op. cit.

(4) For further information on the Japanese promotion systems, for example, see S. Kaneko, "Shoshin-seido", Gendai Rodo-mondai Koza, vol. 1 (1966), pp. 208-22.
About 70 per cent of the firms with 500 employees and 27 per cent of the firms with 30-99 employees carried out internal promotions; over 80 per cent of the large firms and 38 per cent of the small firms conducted internal redeployments of the workforce during 1967 (Source: Ministry of Labour).

employees on the job, or through company training at a particular firm, is not generally recognised as such by other employers so that it is rather difficult for older skilled workers to get a comparable job with a comparable pay in the external labour market, unless there are acute labour shortages (1). For those unskilled or semi-skilled jobs which do not lead directly to higher key grades, workers other than school leavers are hired on a casual basis at low wages approximately similar to those of workers employed at small firms. Most of them are virtually deprived of opportunities for promotion or career development and consequently their turnover rates are high, as contrasted with the high stability of in-bred employees. Those casual workers are, so to speak, a safety-valve against business fluctuations for large firms which have such an inflexible employment policy for in-bred employees, because they can easily laid off or rehired, unlike the in-bred permanent workers for whom employers have incurred a high training cost and who are not easily available in the external labour market. (2)

On the other hand, the internal market of Japanese small firms is of the open type (3). In these firms the stability of employees

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(1) Among the newly hired job-changers, the proportion of those who were hired for their special skill or expertise was only 6 per cent in 1968 (Source: Ministry of Labour.

(2) K. Ymamoto, "Rinjiko, Shagaigo no Haichi", Gendai Rodo-mondai Koza, vol. 1 (1966), pp. 224-40. Also see K. Kobayashi, Gendai Nihon no Koyo-kozo (1967).

(3) 84 per cent of the firms with 30-99 employees hired workers other than school leavers, while the proportion was 44 per cent for the firm with 5000 employees or more in 1968 (Source: Ministry of Labour).

(as measured in terms of the average length of service with the present employer) is much lower and turnover rates are higher than at large firms (1). Labour mobility between small firms and of casual workers between large and small firms is quite high (2). We may, therefore, say that a single external market for manual labour is formed within the local market to cater for small firms and casual employment at large firms. As contrasted with those in-bred permanent employees whose employment relationship with large firms reflects elements of bilateral monopoly, those workers employed at small firms or for casual jobs at large firms are always exposed to competition among themselves and from job-changers who flow in from agriculture or other occupations in industry. Such a labour market structure is reflected in the internal wage structure, wage levels, and trade union structure, which we shall soon discuss.

In Britain open-type internal markets combined with some internal mobility seem to be more common than in Japan, because of her long tradition of craft unionism and the more developed habits of occupational labour markets. Nevertheless large firms in new industries often find it difficult to obtain workers with the required type of skill in the external market, so that they are obliged to breed

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(1) The average age and length of service of employees working in firms with 1000 employees or more were 32 years and 10 years respectively, while those of workers employed at firms with 10-99 employees were 33 years and 5 years, in 1967 (Source: Ministry of Labour).

(2) See K. Kobayashi, op. cit.

some of their own employees by internal training. Since the supply of and demand for these new types of skill may be limited to particular firms, it is convenient, in such a case, for both employers and employees to have continuous and stable employment relations.

2. Internal Wage Structure and Methods of Wage Payment

The development of the internal labour market allows individual firms to develop an internal job hierarchy or a job evaluation system, and an internal wage structure and various forms of wage payment based on it, according to their own needs. It is difficult to generalise as firms may have different principles of job stratification or job evaluation, on the one hand, and some firms have not a consistent set of principles for job stratification or evaluation and wage administration based on it so that the wages of particular workers or jobs are determined extemporaneously and irrelevantly to those of others in the same firm, which results in a chaotic internal wage structure (1), on the other. Moreover, although it is comparatively easy to assess differences in the performance of workers within a given occupation, it is extremely difficult to apply a functional theory based on productivity and responsibility to determine pay differentials for different occupations. As D.C. Miller and W.H. Form rightly pointed out, a "status" pay check is easier to justify than a "productivity" pay check (2). This is particularly true for the pay of indirect labour such as white-collar workers, for whom there is no

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(1) See, for example, National Board for Prices and Incomes, Pay and Conditions of Service of Engineering Workers, Report No. 49 (1967), Comnd. 3495.

(2) op. cit.

direct method of measuring productivity. On the other hand, it is often possible to measure the productivity of production workers so that attempts to relate their wages to productivity have been made and various methods have been devised for this purpose (1).

But even in the pay pocket of these workers, as shown in the left-hand column of Table 6-1, only a minor part of their earnings is attributable to payment-by-results system (PBR), though the proportion varies considerably between industries and is generally higher for women (in Britain).

Table 6 - 1

	Payment by Results			
	Percentage of earnings attributable to PBR:		Percentage of employees having received pay based on PBR as a component of their earnings:	
	Britain	Japan	Britain	Japan
All industries & services	8.9(12.0)	6.7	24.1 (22.5)	15.0
Manufacturing	13.2(21.7)	4.1	36.5 (41.3)	14.0
(Metal manufacture)	19.9	18.2	58.8	60.9*
(Vehicles)	21.6	7.4	46.6	34.4*
(Bricks, pottery, etc.)	18.3	3.9	46.6	26.9*
Mining	11.8	27.3	14.3	45.5
Transport & communication	4.8	16.6	19.4	36.6
Skilled	10.6 (33.8)			
Semi-skilled	16.6 (22.4)			
Unskilled	8.1 (11.1)			
Nonmanual	0.4 (0.3)			

Note: -
1. The parethesised figures are for women and the asterisked, for 1964 in Japan.
2. British figures are, except for those otherwise specified, for full-time manual men paid for a full week, September, 1968.
3. Japanese figures are, except for those otherwise specified, for all employees irrespective of sexes and manual-nonmanual, September, 1967.

Source: Employment and Productivity Gazette and Yearbook of Labour Statistics.

(1) See, for example, N.C. Hunt, Methods of Wage Payment in British Industry (1951).

Payment-by-results systems are more widely used in Britain than in Japan, though they are more important in heavy industries in both countries and in mining, and transport and communication, in Japan. Particularly in metal manufacture, nearly 60 per cent of employees in the industry received pay based on PBR as a component of their earnings and this source alone accounted for nearly 20 per cent of their total earnings in both Britain and Japan. PBR is more important for semi-skilled (in the case of females, skilled) workers but negligible for the earnings of nonmanual workers in Britain. Moreover, PBR systems covered 44 per cent of Japanese manufacturing workers in 1939 and the proportion fell rapidly thereafter to 37 per cent in 1954, 19 per cent in 1964 and to the present level (14 per cent) (1), while in Britain 'there is no clear evidence of any overall movement to, or away from, PBR since 1961' (2).

Earnings differentials between workers within a firm arise from different sources which are created by management to serve different purposes or needs of their own or employees. Table 6 - 2 shows the percentage composition of total earnings by form of payment and the percentage of employees who received pay based on a particular form of payment as a component of their earnings. Among the various components of earnings, basic pay is by far the most important for most workers in both Britain and Japan.

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(1) T. Tanseiya, "Noritsukyu", Gendai Rodo-mondai Koza (1966), p. 173.

(2) National Board for Prices and Incomes, Report No. 65 (1968), p. 8.

Table 6 - 2

Make-up of Pay

Great Britain: full-time men paid for full week, September, 1968			Japan: all employees, September, 1967	
Basic pay	67.4 (91.2)	96.3	Basic pay	73.0
Overtime pay	16.1 (2.3)	62.0	Overtime pay	11.4
PBR	8.9 (0.4)	24.1	PBR	5.1
Shift premium	2.3 (0.2)	10.3	Supplementary payments for living cost	5.3
Commission	0.3 (2.7)	1.8	Duty allowances	3.0
Bonuses or profit sharing	2.2 (2.2)	23.6	Turn-up allowances	1.3
Holiday pay	0.4 (0.3)	1.7	Other payments	0.9
Guarantee pay	0.3 (0.0)	2.5		
Other payments	2.1 (0.9)	26.0	(Special yearend and summertime bonuses)	

Figure in ( ) are for nonmanual men.

Note:- 1. Supplementary payments for living cost consist of family allowances, area additions, travelling allowances, housing subsidies, etc.
2. Duty allowances consist of responsibility pay, danger or dirty money, inconvenience pay, skill additions, etc.
3. Other payments in Japanese pay consist of holiday pay, guarantee pay, uniform allowances, etc.
4. Supplementary payments for living cost, duty allowances and turn-up pay are included in other payments in British pay.
5. Special bonuses allowed twice a year are equivalent to 3.5 months' pay in Japan.

Source: Employment and Productivity Gazette and Yearbook of Labour Statistics.

A large part of earnings differentials are, therefore, ascribed to differences in basic pay, though other components also influence differentials. Basic pay is calculated on time worked and time rates. In Britain the period of time involved is a month, or sometimes a year, for salaried workers and a week or less for wage earners (1). In Japan,

(1) L.C. Hunter and D.J. Robertson, op. cit. pp. 54-57.

the period of time involved is a month for both white-collar and blue-collar employees at large firms, while at small firms it is largely a month for salaried workers and a day for many wage-earners (1). Standard time rates most concern both management and workers. They may or may not be negotiated through collective bargaining. Outside the unionised sector of the economy, they are determined by market forces, management policy, or statutory wage councils or other government bodies. In Britain salary scales which are directly related to age (e.g. bank employees) or length of service (e.g. school teachers) or to job evaluation or grading systems, whether or not indirectly related to age or length of service (e.g. Imperial Chemical Industries Ltd., Electricity Supply Industry) (2) are established for the pay of salaried workers so as to allow periodic salary increments for them, while the wages of manual workers are determined grade by grade (sometimes within a range for a given grade) for each occupation irrespective of age or length of service, except for juvenile workers (whose wages are usually related to age between 16 and 20) or "service pay" for workers who have worked over a certain period of time for the present employer (e.g. municipal busmen) (3). In Japan, the time rate (monthly basic pay) is predominantly determined for the man

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(1) More than 80 per cent of the firms with 1000 employees or more pay both white-collar and manual workers on a monthly basis and 40 per cent have a provision for deductions in case of workers' failure to turn up, while 37 per cent of the firms with 30-99 employees pay both types of workers on a monthly basis and 49 per cent do so only for white-collar workers in 1967 (Source: Ministry of Labour).

(2) National Board for Prices and Incomes, Reports Nos. 25 (1967), 5 (1965), 105 (1969), 109 (1969), 106 (1969), etc.

(3) National Board for Prices and Incomes Reports Nos. 63 (1968), etc.

rather than for the job. In other words, the basic pay of both non-manual and manual employees (other than casual workers) is largely determined according to personal characteristics of the individual worker such as age, length of service, educational career, ability, skill, diligence, past performance, experience, etc. (1) Among other things, age or length of service is often a decisive factor at many firms. (2) Most Japanese firms have a periodic incremental system which allows employees, either white-collar or manual, to be progressed through the salary scales or wage schedules, though the award of periodic increments is not always automatic. (3) The main jutification for this system is, from the manager's point of view, that 'increased experience in the job should lead to improved performance' (4) or from the older worker's point of view, that the man with family responsibilities should receive more than an unmarried, young man so as to meet the growing needs of his family (5). The view of the latter is particularly significant where State social security system is inadequate

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(1) For further analysis of this matter, see K. Koike, Chingin (1966).

(2) The establishment which determined wages by job evaluation systems, or by the appraisal of employee job-performing ability, or by types of job were 2.5, 2.4, and 3.8 per cents respectively and other establishments more or less took account of age, length of service, educational career, etc. in their wage determination, (September, 1967) (Source: Ministry of Labour).

(3) About 94 per cent of all Japanese firms had some form of periodic incremental system; more than 85 per cent of the firms with 1000 employees or more and 35 per cent of the firms with 30-99 employees had an employee assessment system; more than 60 per cent of the large firms and 30 per cent of the small firms had salary scales and wage schedules, as at September, 1967 (Source: Ministry of Labour).

(4) J. Valerie Grant and G.J. Smith, op. cit. p. 240.

(5) T. Izume, "Nenkojoretsukyu Shokumukyu," Gendai Rodo-mondai Koza (1966) pp. 100 - 102.

and the employer is eager to practise paternalistic management. In this connection, other forms of payment, even payment by results, are more or less related to the principles of the determination of basic pay, i.e. largely determined according to age or length of service and the weight of supplementary payments for living cost are considerably greater in the Japanese pay system. (1)

As a result of these pay systems, as we have seen in Chapter 4, the pay structures of British salaried and Japanese (either nonmanual or manual) workers are characterised by age differentials, while the wages of British manual workers is almost independent of their age except for juveniles. The tendency for pay to rise with age is even more distinct for the pay of employees at Japanese large firms (Figure 6 - 1). The pay of these employees continues to progress with age and length of service up to a retirement age (usually 55), while that of nonmanual employees at small firms reaches a peak in their 40's and the range of age differentials for the latter is much narrower. It seems that this apparently reflects the difference in the internal labour market structure between large and small firms, which we referred to earlier (2). But there are other reasons for this. The structure of a large organisation and its promotion ladders are more complicated than those of a small organisation. There need to be more steps in the salary scales to maintain appropriate status-pay differentials for different strata in the hierarchy of the former organisation.

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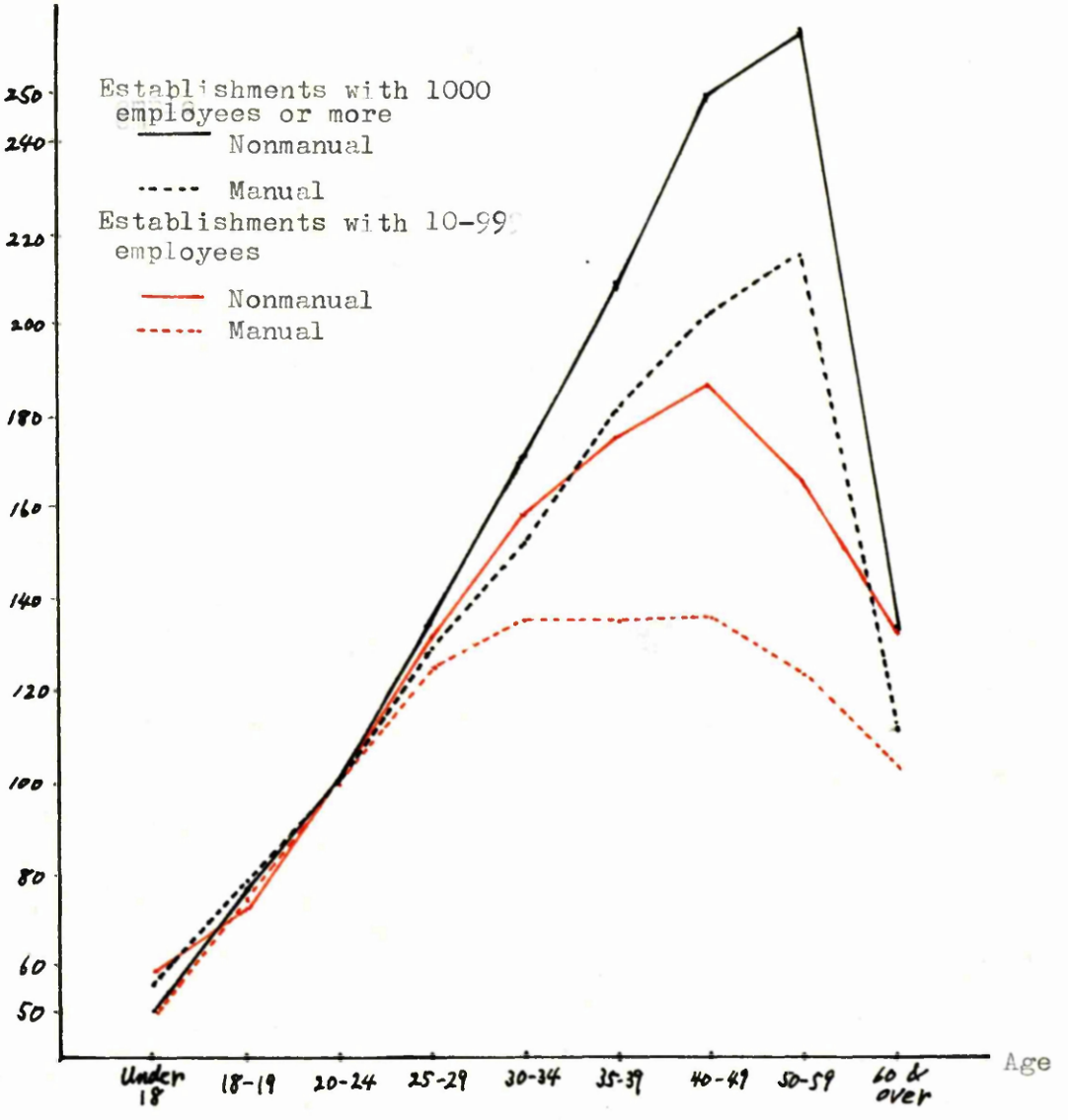
(1) S. Funabashi, op. cit. pp. 139-334.
(2) There is an objection to this view. See K. Koike, op. cit. p. 222.

Figure 6 - 1

Japan: Average monthly earnings of male workers in manufacturing industry by age group, as on index, group aged 20-24 = 100, April, 1967



Source: Ministry of Labour.

Although the range of pay differentials between occupations, between grades or between workers and their ranking in the internal wage hierarchy may be determined by market forces, collective bargaining or management policy, or a combination of them, there is the social demand that the wages so determined should be "fair" for all workers and, once the range of differentials between them and their ranking are established, these wage relationships tend to be maintained for a long time by custom. (1) The age-related pay system is a potential source of wage-cost increases. Although this system may decrease turnover rates and increase employees' attachment to a particular employer, the average wages of the present employees automatically increase with the passing of time unless the employer continues to take in young recruits, so that the wage bill of those firms which have suspended recruitment and sustain the present employees keeps rising over a period of time as far as the pay system and the existing age differentials are maintained. What is more, steep increases in the wages of young workers are likely to push up the whole wage structure so as to maintain the established age differentials. These demerits of the age-related pay system, coupled with the shortage of young workers and their preference for a more rationalised pay system, have induced employers to strive for the introduction of a pay system based on job analysis and job evaluation in recent years in Japan (2).

Methods of wage payment can also have an impact on wage

(1) E.H. Phelps Brown and J. Wiseman, A Course in Applied Economics (1964) pp. 235-7.
(2) K. Takahashi, Nihon no Chingin Kanri (1965), pp. 119-39.

Methods of wage payment can also have an impact on wage drift. If the wages of one type of workers rise faster than those of another where the established differentials arising from some source, for example differentials between piece-workers and time-workers or between skilled and unskilled workers, are strictly maintained by trade unions, customs, or management wage policy, wage drift will result (1). Conventional payment by results systems have been a major source of primary wage drift. But a factor of primary importance is the extent to which management relies on these systems. They are said to be more widely used in Western countries, especially Scandinavian countries, but as mentioned earlier, they are less important in Japan than in Britain.

3. Labour Costs

Salaries and wages are not all costs which the employer incurs to employ workers, though they are, of course, the most important component of labour costs. Labour costs are a more relevant concept than salaries and wages when we think of cost-push inflation. The proportion of wages and salaries in total labour costs for British manufacturing workers is much larger than that of other European countries (2). The proportion does not only differ from one country to another but also varies between industries, between firms and between different time periods in a given country. White-collar workers usually receive more fringe benefits than wage-earners and

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(1) E.H. Phelps Brown, op. cit.

(2) The proportion is 91% for Britain, 83% for West Germany, 72% for France, 71% for Italy, 80% for Netherlands and Belgium, in 1968 (Source: Employment and Productivity Gazette).

consequently industries and services with a high proportion of salaried employees such as insurance and banking, gas, electricity and water, tend to have a high ratio of labour costs other than wages and salaries, though mining is an exception (1). Large firms provide more private social welfare payments, subsidised services, payments in kind for their employees than small firms do (2). There is a tendency for fringe benefits, statutory national insurance contributions, cost of recruitment and training, etc. to increase in percentage terms as well as in absolute terms - more than proportionately to increases in wages and salaries - in recent years in both Britain and Japan. Apart from statutory national insurance contributions and the like which are largely determined outside the direct control of management, the increases in those costs may arise

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(1) The proportion of wages and salaries in total labour costs was 75.7% for insurance and banking, 87.7% for gas, electricity and water, 82.8% for mining quarrying in 1968 in Britain: 86% for insurance and finance, 80% for gas, electricity and water, and 76% for mining, in 1968 in Japan (Source: Employment and Productivity Gazette and Yearbook of Labour Statistics).

(2) The proportion of private social welfare payments plus subsidised services in total labour costs was 2.6% at firms with 25-249 employees, 3.5% at firms with 250-999 employees and 4.4% at firms with 1000 or more employees in British manufacturing industry; 6.6% for firms with less than 500 employees and 8.0% for firms with 5000 employees or more in Japanese industry (Source: Employment and Productivity Gazette and Nikkeiren).

Table 6 - 3

Analysis of Labour Costs
- as percentage of total labour costs -

	Britain: manufacturing.		Japan: all industries and services	
	1968	1964	1968	1965
Total labour costs	**100.0**	**100.0**	**100.0**	**100.0**
Total wages & salaries	**91.3**	**91.8**	**86.1**	**86.3**
Statutory national insurance contributions	4.4	3.6	5.1	4.7
Selective employment tax (net)	-1.6	-	-	-
Provision for redundancy	0.4	-	-	-
Retirement or severance payments (private)	-	-	2.7	2.6
Private social welfare payments	3.2	3.1	3.9	4.5
Training	0.8		0.3	0.3
Subsidised services	0.9			
Payments in kind	0.1	1.5	0.9	0.8
Recruitment			0.5	0.3
Other Labour costs	0.5		0.5	0.5

Source: Employment and Productivity Gazette and Yearbook of Labour Statistics.

from the employer's efforts to attract or retain labour (1). Managers are primarily responsible for and have the initiative in the determination of various fringe benefits and the cost of training and recruitment, though trade unions may be concerned with some of them, for example, holiday with pay, pension schemes, severance payments, etc.

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(1) Royal Commission on Trade Unions and Employers' Associations 1965-1968, Report (1968), points out that arrangements for dealing with fringe benefits were not the subject for collective bargaining generally (p. 21).

Approximately one quarter of total labour costs are not part of the direct remuneration for labour services actually supplied by the employee (pay other than holiday and guarantee pay, supplements for cost of living, travelling allowances, etc.) in Japan, as compared with a little over one tenth in Britain, so that it would also be necessary to review those labour costs other than wages and salaries from the point of view of cost control. (1)

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(1) In this connection, H.M. Levinson emphasised that 'since the end of World War II, collective bargaining has placed increasing emphasis on privately negotiated fringe benefits, with the result that these benefits have been rising relatively much more rapidly than hourly earnings. The omission of fringe benefits can be particularly misleading ....' (Determining Forces in Collective Wage Bargaining (1966), pp. 1-18.)

CHAPTER 7

WAGE DETERMINATION UNDER COLLECTIVE BARGAINING

The raison d'etre of an incomes policy lies, as we have discussed in Chapter 1, in that trade unions push up the money wage level above that which would otherwise be determined by demand and supply conditions in the labour market, so that it is necessary to persuade trade unions to restrain the abuse of their power for the purpose of suppressing cost-push inflation. The main question for this chapter is whether or not such is the case for British and Japanese trade unions. Although some people emphasise the presence of union monopoly (1), there is in reality no single trade union or federation of trade unions that has perfect control over the total supply of the nation's labour force in Britain, Japan or elsewhere: in other words, the national labour force is only partially organised in any country. Of course, the degree of unionisation varies between countries and within a country union membership is unevenly distributed among industries, occupations, regions or firms. The labour market may be separated into the organised and unorganised sectors for the purpose of analysis. In the unionised sector wages are supposed to be determined through collective bargaining and in the unorganised sector, by market forces or individual bargaining. Furthermore, some countries or some industries within a country have a highly centralised system of collective bargaining, while in other countries or other industries within the

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(1) E.S. Mason, "Labour Monopoly and All That", Annual Proceedings, I.R.R. (1955) pp. 188-208.

country the power of trade unions is decentralised. First, we shall look into the trade union structures of Britain and Japan. Then the collective bargaining systems (together with statutory minimum wage system) of both countries and the way in which wages are fixed under these systems will be examined. Lastly, the actual impacts of trade unionism on wages in both organised and unorganised sectors (through spill-over effects (1)) will be discussed.

1. The Structures of Trade Unions

There are great variations in trade union density - union membership as percentage of employees or labour force in general - between countries. And these variations do not seem to be particularly ascribed to differences in the degree of industrialisation of the countries concerned. Since the number of employees increases, in either absolute or relative terms, with progress in industrialisation and trade unions are employees' organisations, trade-union membership, either as percentage of total labour force or in absolute terms, may be expected to increase up to a certain point with rises in the proportion of employees in total labour force. But union density is not particularly related to the degree of industrialisation or the ratio of employees to total working population. J.T. Dunlop pointed out as bearing on the development of trade unionism the following four factors: technology; market structures and the character of competition; community institutions of control; and ideas and beliefs, in other words, the value system of the community (2). As shown later, there are some

(1) F. Machlup, op. cit.

(2) J.T. Dunlop, "The Development of Labor Organisation: A Theoretical Framework", R.A. Lester and J. Shister (eds.), Insights Into Labor Issues (1948), pp. 163 - 93.

features common to industrial countries in the distribution of trade-union membership among industries, that can be ascribed to the nature of the industry concerned (types of technology, market structures, etc.) but the type of trade unionism which is more prevalent in a

Table 7 - 1

Country	Year	Trade-union membership (in thousands)	Union density: (as percentage of employees)	(as percentage of total labour force)
Japan	1963	9,357	36	20
U.K.	1963	9,917	42	40
USA	1962	16,586	30	23
W. Germany	1964	7,884	36	29
Canada	1963	1,449	26	22
Australia	1963	2,004	60	44
India	1962	1,766	43	1

Source: Rodo-gyosei Kenkyujo, Zenkoku Shuyo Rodokumiai Ichran, p.166

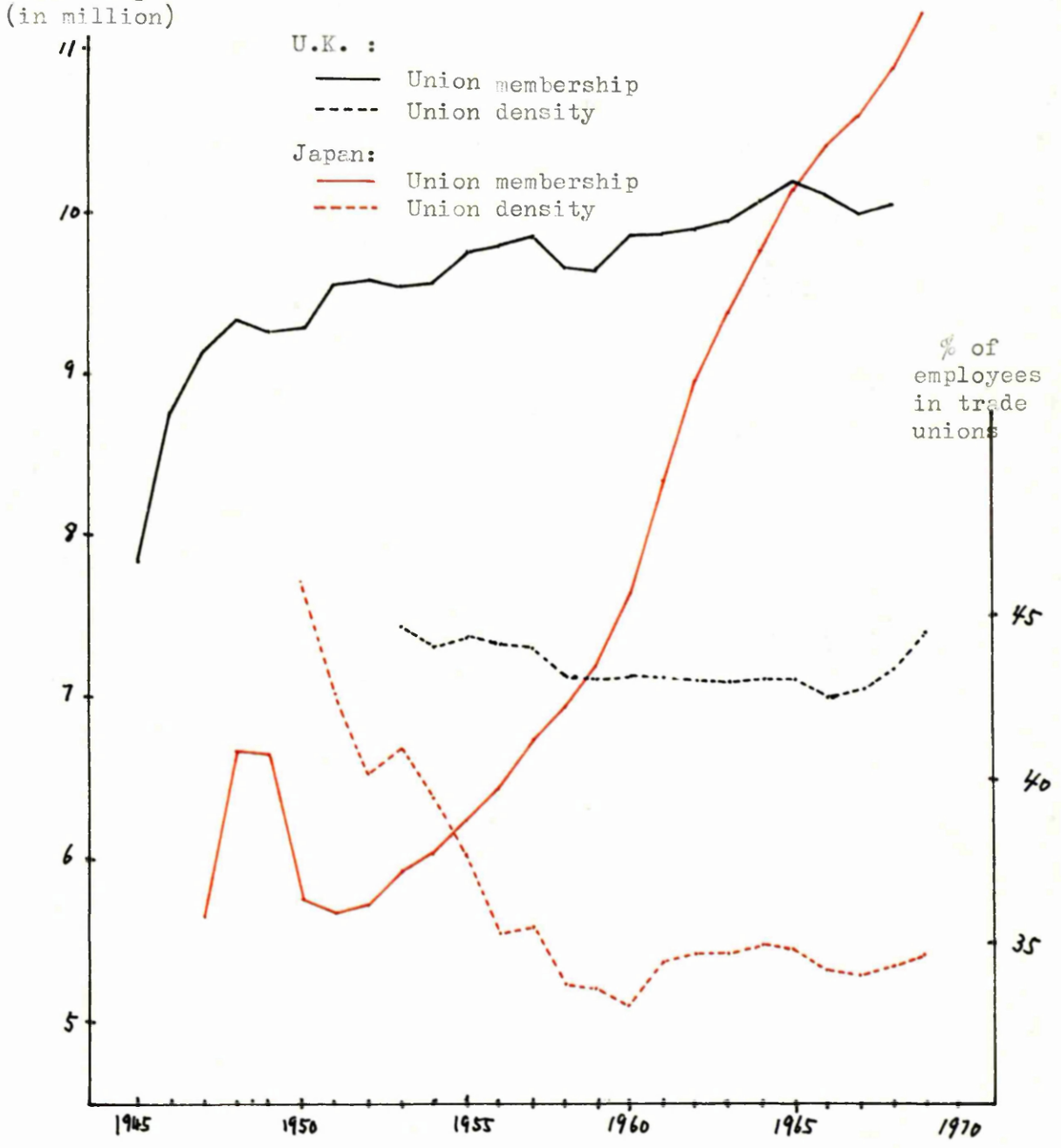
country seems to be a product of historical development rather than of the degree of industrialisation.

Trade-union membership in the United Kingdom expanded rapidly from the close of the last century till 1920 when there were over eight million trade unionists, shrunk thereafter to half that number in 1933, expanded again till the end of the 1940's and remained fairly stable during the last two decades (1). The relative stability of union membership is also apparent during the same period in the United States where the number of union members attained a peak in 1920, declined thereafter till 1933, but recovered by the middle of the

(1) Source: H. Pelling, A History of British Trade Unionism (1969), pp. 261 - 4 (Statistical Table).

Figure 7 - 1

Post-war trends in trade-union membership in the United Kingdom and Japan



Source: Ministry of Labour Gazette, Employment and Productivity Gazette; and Labour Union Basic Survey (Japan)

1950's (1). In Japan trade unionism was quantitatively negligible in the pre-war period because of repressive legislation (2) but there was a remarkable development under the permissive legislation of the post-war period. Union membership mushroomed within a few years immediately following the end of the war, numbering over six million in 1946, and union density registered a record high of 56 per cent in 1949, as shown in Figure 7-1. Faced with such difficult conditions at home and abroad as business depression and large-scale purges of communists and sympathetic leaders from the unions following an aggravated confrontation between the Soviet Union and the United States, however, the Japanese trade unionism suffered a temporary setback in the ensuring years. Again, while union membership has risen rapidly, union density fell until 1960 and has remained stable thereafter. Today, Japan has the largest union membership next to that of the United States in the free world and union density in Japan is higher than in the United States and similar to European countries save Britain and Scandinavia. Taking into account a smaller proportion of employees in total working population, however, Japan's union membership as percentage of total working population is still low by European standards, as shown in the right-hand column of Table 7 - 1. Although we do not consider that union density itself

(1) L.G. Reynolds, op. ci., p. 30.

(2) Union membership in pre-war Japan was only 420,000 in 1936, an all-time high before the war and the pre-war highest percentage of employees in trade unions was 7.9 in 1931 (T. Shirai, Nihon no Rodokumiai (1967), p. 2), though this figure is not particularly low, as compared with 3.8% in 1930 in the USA (L.G. Reynolds, ibid). For fuller discussion of the subject, see K. Okochi, "Traditionalism of Industrial Relations in Japan", and T. Ishii, "The Changing Role of Labour Legislation in Japan", in The Changing Patterns of Industrial Relations (1965), pp. 126 - 141, 224 - 232. Also see M. Sumiya, Nihon Rodo-undo-shi (1966), S. Shiota, Nihon Rodo-undo no Rekishi (1964).

directly determines union strength or pushfulness in wage bargains because, for example, in countries with a low union density like the United States the problem of union monopoly is also sometimes urgent or taken seriously, a low union density implies that the direct influence of collective bargaining on the determination of incomes in general may be more limited, or to put it in another way, a substantial part of national income is likely to determined outside the framework of the collective bargaining system.

Union membership is unevenly distributed among the industries. American labour economists point out that there is strong correlation between industry union density (which H.M. Levinson referred to as union strength) and output concentration in manufacturing industries (1). This is more or less true in Britain and Japan. Industries with a high level of industrial concentration such as metal manufacture, engineering and chemicals have a high union density, while light industries have a relatively low union density. Outside manufacturing industry, there are some variations: mining, trransport and communication are well organised and agriculture, distributive trades and miscellaneous services are poorly organised in all the three countries, while white-collar workers employed in government, education, and finance and insurance (particularly in Japan) are well organised in Britain and Japan but not so in the United States (2).

(1) J.W. Garbarino, op. cit. H.M. Levinson, "Unionism, Concentration, and Wage Changes: Toward a Unified Theory", in Industrial and Labor Relations Review, vol. 20, No. 2 (January, 1967).

(2) B.C. Roberts (ed.), Industrial Relations: Contemporary Problems and Perspectives (1962), p. 72. T. Shirai, op. cit. pp. 8-13. L.G. Reynolds, op. cit. pp. 47-9. Also see Appendix .

What is more, big labour organisations exist among these well-organised industries and services. One thing to note is that there

Table 7 - 2

Top ten biggest labour organisations in Britain and Japan in 1967

Britain	Membership ('000)
Transport and General Workers' Union	1,451
Amalgamated Union of Engineering and Foundry Workers	1,044
National Union of General and Municipal Workers	782
National Union of Mineworkers	380
National Association of Local Government Officers	367
Electrical, Electronic Telecommuncation Union	352
Union of Shop, Distributive and Allied Workers	321
National Union of Teachers	270
National Union of Public Employees	265
Society of Graphical and Allied Trades	220
Japan	
All Japan Prefectural and Municipal Workers' Union	819
Japan Teachers' Union	550
Japan Federation of Textile Workers Unions	505
All Japan Federation of Electrical Machine and Tool Industry Workers Unions	402
National Railway Workers' Union	277
General Federation of Private Railway Workers' Unions of Japan	256
Japan Postal Workers' Union	245
National Telecommunication Workers' Union	227
National Federation of Metal Industry Workers' Union	220
National Trade Union of Metal and Engineering Workers	204

Source: Trades Union Congress Report (1968) and Yearbook of Labour Statistics.

are a considerable number of big independent trade unions (which have autonomy and a large membership of, say, over 100,000) in Britain and the United States, while there are few independent trade

unions of comparable size in Japanese private industry, for most Japanese trade unions are organised on a firm or plant basis. Many of the Japanese labour organisations mentioned in the table above are, therefore, industrial federations of autonomous trade unions.

Many of the highly organised industries and services occupy a key position in the national economy in the sense that they are suppliers of energy or basic materials like coalmining, iron and steel, electricity and gas, or services essential to everyday life of the nation like transport and communication, so that stoppages of work in these industries and services are particularly detrimental to other industries and the public in general. Exploiting this situation, trade unions in these industries and services tend to press their demands against not only employers but also the public. Employers, too, taking advantage of their monopolistic position, tend to sacrifice public interests rather than resist strong union pressures unless there is government intervention. These trade unions had, or have, a great influence on collective bargaining in other industries, which we shall discuss later.

The public sector, including public corporations (1), nationalised industries (2) etc., employs an increasingly large part

(1) The composition of employees in the public sector in 1967 in Japan is: national government, 590,000: local government, 3,021,000; public corporations (Japan National Railways, Japan Telegraph and Telephone Corporation etc., including Postal Service, national and local public enterprises, 1,376,000 (Source: Statistical Abstract of Japan).

(2) The British public sector consists of government services (1,346,000 in 1966) and nationalised industries (1,881,000 in 1966) (Employment and Productivity Gazette; Select Committee on Nationalised Industries (1968), Ministerial Control of the Nationalised Industries, H.M.S.O., Vol. 3, p. 2).

of the nation's labour force (14.3 per cent of total employees in 1966) in the U.K., and 13.1 per cent in 1968 in Japan) and is highly organised by big unions in both countries (1). Various restrictions are put on collective action of employees in this sector in Japan; strikes or other industrial action are totally banned by legislation for all employees in either government services or public corporations; besides, both national and local government employees are refused the right of collective bargaining (instead, as a compensation for this, the National Personnel Authority and local government personnel committees are established to investigate wages in private sector and make recommendations on the wages of public employees) (2). Therefore, it may be appropriate to exclude in Japan the unions of these employees (nearly 30 per cent of total union membership) from the trade unions in the generally accepted sense.

Despite several common features of the industrial pattern of union density, the structure of trade union organisation differs very much from one country to another. It seem that the structure of trade union organisation is a more important factor affecting union strength than the mere size of membership or union

(1) Union membership in the public sector was: 256,000 in national government, 1,500,000 in local government, 1,005,000 in public corporations, etc., 177,000 in local public enterprises in 1965 in Japan: In Britain, union membership was, for example, 466,000 in national government service, 724,000 in local goverament service, 606,000 in coalmining, 310,000 in railways in 1968 (Source: Employment and Productivity Gazette: Labour Union Basic Survey (Japan).

(2) K. Kamishiro, "Chingin nlokeru Churoi Koroi Jinjin", Gendai Rodo-mondai Kozza vol. 2 (1967), pp. 296-314.

density (1). In Britain, 'every conceivable type of organisation exists and no one type can be said to predominate.' (2) The types of British union organisation are customarily classified into three main groups: occupational (or craft) unions; industrial (or common employment) unions; and general unions. The last type of organisation is said to be most characteristic of British trade unionism today. According to A. Flanders, 52 main trade unions affiliated to the Trades Union Congress are roughly classified into 25 craft or occupational unions, 21 industrial or common employment unions, 3 unions with characteristics of both types, and 3 general unions (3). In reality, however, 'pure forms are hard to find', though these classifications have a certain historical validity (4). Many trade unions which started as small, single-craft unions in the last century have turned into larger, multi-craft unions by amalgamations and the admission of less skilled workers (5). On the other hand, small craft unions have still survived. Besides, in Britain, white-collar unions have developed separately from manual unions, though some manual unions have extended their organisation into white-collar employment. White-collar unionism is generally much stronger in public than in private employment where, particularly in private manufacturing industry, employers have been

(1) H.M. Levinson pointed out as factors affecting union power the degree of internal strength, the militancy of union membership, cohesiveness of the unions and employers involved, and the aggressiveness of union leadership (op. cit. pp. 264 - 76).
(2) A. Flanders, Trade Unions (1968), pp. 25.
(3) ibid., pp. 25-7.
(4) H.A. Turner, "Trade Union Organisation", Political Quarterly, vol. 25 (1956), pp. 67-79.
(5) H. Pelling, op. cit. Chapter 6 (pp. 93-122).

very reluctant to grant union recognition for white-collar workers.

Another factor which has made the British trade union structure extremely complex is "multi-unionism": in most industries or firms there are two or more trade unions of similar or different types, so that 'several unions within the factory or office have to work together.' (1) This situation has, in turn, contributed to strengthening the position of work groups and shop stewards speaking for them on the shop floor and increasing their independence from trade union branches. On the one hand, shop stewards who deal with multi-union issues inside the factory are hardly made reponsible to a particular union authority outside, for they are often obliged to act for the common interests of workers in the same workplace, independently of individual union policies, rather than promote the interests of particular unions which each affiliate part of these workers and adopt conflicting policies towards them: If the shop stewards listen to one union only, those workers in the same workplace who are affiliated to other unions will not follow them. Of course, if all unions which affiliate some workers at a given workplace coordinate their policies beforehand, no such problem will arise. On the other, full-time union officials find themselves incapable of tackling plant-level issues because it is not easy to keep in touch with small groups

(1) Royal Commission on Trade Unions and Employers' Associations 1965-1968, Report (1968), H.M.S.O., p. 30. This "Donovan Report" also pointed out that 'about four out of every five trade unionists in Britain work in a multi-union establishment and perhaps one in six of them belongs to a grade of worker in which two or more unions are competing for members.' (p. 20).

of members scattered over many factories and these issues often involve members of other trade unions within the factory. In this connection, one empirical study, pointing out low participation by workpeople in branch affairs and changes in the attitudes of them towards trade unions in recent years (e.g. 'concurrent relatively high involvement in unionism at workplace'), mentioned that 'almost complete divorce between the unionism of the branch and the workplace which is manifest is likely to develop on a much wider scale, as also may associated views of the functions of trade unions of a distinctively limited and instrumental kind. (1). Thus, the authority of trade unions has been undermined at workplace level because they have often failed to tap the feelings of their rank and file.

Another aspect of the British trade union structure is the long-run trend towards greater concentration of union membership into big unions: Since the First World War the number of British trade unions has steadily declined through mergers or amalgamations (2). However, while the average membership size of trade unions has increased, more than fifty per cent of Britain's 555 trade unions (in 1968) are still small, having a membership below 1000. This compares with nine big unions with over a quarter of a million members each, which account for more than fifty per cent of all trade unionists in the

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(1) J.H. Goldthorpe et al., The Affluent Workers: Industrial Attitudes and Behaviour (1970), p. 176.

(2) The number of trade unions declined from 1,384 in 1920 to 781 in 1945, and further to 555 in 1967 (Source: H. Pelling, op. cit.). The average size of unions increased from about 6,000 in 1920 to 18,800 per union in 1968.

country. The "big three" (Transport and General Workers' Union, Amalgamated Union of Engineering and Foundry Workers, and General and Municipal Workers' Union) affiliate over three million, or one third of Britain's total union membership (1). Nearly one third of all British trade unions are affiliated to the Trades Union Congress and its General Council. Although the remaining two thirds of trade unions are outside the T.U.C., nearly ninety per cent of British trade unionists, are affiliated to this central body so that it 'can fairly claim to speak in the name of the movement as a whole.' (2). However, the T.U.C. has no formal power to bind any member union to its decisions. The limits of its power are easily seen by the fact that 'a trade union in affiliating to the TUC does not yield up any part of its autonomy.' (3). Thus, the British trade union structure has two major weaknesses in terms of internal control, namely, lack of control by the central body over affiliated member unions and shift of power from union leaders to individual work groups or shop stewards speaking for them at the factory level.

The most prominent feature of the Japanese trade union structure is that almost all trade unions with few exceptions (the most important exception is All Japan Seamen's Union with an affiliated membership of about 143,000) are organised on a company or plant basis. The "enterprise union" (or the confederation of plant unions

(1) Source: TUC Annual Report (1968).
(2) A. Flanders, op. cit., p. 24.
(3) ibid. pp. 60-1.

within the same enterprise) whose membership is limited to employees of a particular enterprise has autonomy as a bargaining unit and negotiates all aspects of the terms and conditions of employment for its member workers with the employer. It usually affiliates both white-collar and manual workers employed at the same enterprise, irrespective of their occupations, though casual or part-time workers are often excluded from it (1). There are nearly 30,000 autonomous trade unions in Japan and, in contrast with the British trend towards greater concentration in union membership, the number of trade unions has steadily increased since 1955 (2). The average membership size of Japanese trade unions is consequently very small (379 in 1969), as compared with 19,000 in 1968 in Britain, and does not particularly have a tendency to increase (3). Ninety-five per cent of Japanese trade unions had a membership below one thousand, or alternatively trade unions with a membership of less than one hundred constituted more than sixty per cent of the whole, in 1969. Although the minute size and multiplicity of trade unions are more prominent in Japan than in Britain, union membership is concentrated in a limited number of large unions in Japan as well (44 per cent of total union membership belonged to 274 trade unions having 5,000 affiliated members or more in 1967). As in other industrial countries, workers employed at large firms are generally better organised than those employed at small firms in Japan. About four out of every five

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(1) H. Tsuzumi, "Rodokumiai no Soshiki", in T. Shirai (ed.) Nihon no Rodokumiai (1967), pp. 58-9.

(2) The number of trade unions dropped from 34,688 in 1949 to 18,013 in 1955 and rose again to 29,611 in 1969 (Source: Ministry of Labour).

(3) The average size of trade unions in 1955 was 347 (Source: The same as above).

Japanese trade unionists work either at a firm with 500 employees or more, or in the public sector; 64.0 per cent of workers employed at firms with 500 employees or more are trade-union members, while the proportion is only 6 per cent at firms with less than 100 employees (1). Although about three fifths of Japan's thirty million employees (in 1968) work at small firms (with less than 100 employees), the majority of them are still unorganised.

Many trade unions are newly organised at small firms and nine in every ten of them fail to survive each year (2). The small-firm union usually suffers from lack of good union leaders and instability of membership - the employment of workers itself is, as mentioned in the preceding chapter, unstable - and is financially vulnerable. Probably the unionisation of small-firm employees will not progress very much unless general-union-type organisations are more widely adopted.

Enterprise unions more often than not combine to form nation-wide industrial federations (commonly called "tansan"), which differ in many ways from industrial federations in Britain and (inter-) national unions in the United States. There are more than one hundred 'tansan' for various industries (3). Not all unions in a given industry are affiliated to a tansan for this industry but large-enterprise and

(1) These figures are from Labour Union Basic Survey.
(2) Source: Labour Union Basic Survey.
(3) T. Shirai, op. cit. p. 25. Big 'tansan' with a membership of 100,000 or more numbered some 23.

small-enterprise unions often set up two separate tansan: for example, in chemical and allied industries, large-firm unions are affiliated to the Japanese Federation of Synthetic Chemistry Workers Unions and small-firm unions, to either the Federation of Chemical Industry Workers Unions or the National Federation of Chemical Industry Workers Unions. For the terms and conditions of pay and employment are extremely different between large and small firms so that a united front may be meaningless for the former. From another point of view trade unions contribute little to reducing the existing inter-firm differences in wages and other conditions of work in Japan, as they have done in Britain and the United States. Although the tansan is intended to be industry-wide, it does not cover all enterprise unions in the same industry (1) and there are often separate tansan within the same industry, which are affiliated to different national centres: for example, in coalmining, there are three tansan affiliated to different central bodies (Sohyo, Domei), namely, Japan Coal Miners' Union, National Coal Mining Workers Union, and National Council of Coal Employees' Unions (independent). Since each enterprise union has perfect autonomy in Japan, the main functions of a tansan are to promote the exchange of information between members unions and to coordinate targets in wage claims set by member unions and so forth (2).

There are four main central bodies - superstructures of industrial federations of enterprise unions - in Japan. They are the

(1) Nearly 20,000 (37 per cent of the whole) trade unions, or 2.5 million unionists (24 per cent of the whole) were independent of any federation in 1965 (Source: Labour Union Basic Survey).
(2) H. Tsuzumi, op. cit. pp. 70-72.

General Council of Trade Unions of Japan (Sohyo), the Japanese Confederation of Labour (Domei), the National Federation of Industrial Organisations (Shinsanbetsu), and the Federation of Independent Unions (Churitsuroren). Sohyo, Domei, Churitsuroren and Shinsanbetsu had an affiliated membership of 4.2 million (39 per cent of the country's total union membership), 1.8 million (17 per cent), 1.3 million (12 per cent), and 0.07 million (0.7 per cent) respectively in 1968. The remaining 3.6 million trade unionists and some 50 tansan were affiliated to none of these central bodies. Sohyo, by far the largest organisation of that type in Japan, has lost ground in recent years, partly because many of its member unions belong to that sector where employment has ceased to expand, such as coalmining, railways, government (about two thirds of its affiliated members work in the public sector). But it is still the most powerful and influential labour organisation in Japan, having several important industrial federations (including seven of the top ten big tansan listed in Table 7-1). The other three central bodies, Domei, Shinsanbetsu, and Churitsuroren, draw their members mainly from the private sector, especially some 'growth' industries, and have all gained membership in recent years (1). These central bodies are no more than loose combinations of tansan, or industrial federations, and none of them has formal power over the latter or their substructures (i.e. enterprise unions). The main differences between the central bodies are more political than economic. Sohyo and Churitsuroren support the Japan Socialist Party (a left-wing

(1) A list of major tansan affiliated to these central bodies is available in Appendix XIX.

opposition), Domei, the Democratic Socialist Party (a moderate opposition) and Shinsanbetsu, the Japan Communist Party (1).

Like the trades councils, substructure of the TUC, the Japanese national centres, Sohyo and Domei, have local organisations at the prefectural and district levels. These local organisations were originally set up to strengthen relations between local trade unions, irrespective of their affiliation to national centres, within a particular region or district so as to promote mutual support in strikes, propaganda work and organising, but as rivalry between the two national centres has developed, each of them has tried to bring those independent local organisations into closer alignment with its policy line through personnel and financial help. As a result, each national centre has come to have its own local agents at both prefectural and district levels.

The existing trade union structure in Britain and Japan is a historical product, for once unions of one type are created, they struggle to survive, despite changes in the labour market environment, by adapting themselves to new circumstances and union structure will evolve, if slowly, with these changes in the environment. H.A. Turner points out that 'the direction of a union's growth is influenced by the employment structure of the occupations among which it commences to organise.' (2) So far as the objective trade unions is to improve

(1) N. Mori, "Seito to Kumiai", Gendai Rodo-mondai Koza, vol. 4 (1967), pp. 244-7.
(2) op. cit.

or maintain the wages and conditions of work for their members, it is necessary for them to control the supply of labour services to a particular market. If the labour market is occupationally fragmented, the occupational (or craft) unions serve the purpose best. If internal labour markets are highly developed and differences in labour productivity betwen firms in the same industry are so great that high-productivity firms can continue to enjoy high profits without being exposed to severe competition, or the product market concerned is monopolistic, the enterprise union may effectively function. If the type of labour is easily available and firms are so competitive with one another in the product market that a wage cut at one firm compels other firms to follow suit, the industrial union may be most suitable. If a certain product must compete with substitutes, the industrial unions may be obliged to go beyond the boundary of the industry to organise workers producing these substitutes. Consequently, those industrial unions turn into general unions. Thus, as the labour market structure changed, a considerable number of British trade unions which originally started as craft unions have subsequently turned into multi-craft or general unions. In Japan, several germinal forms of craft union were found at early stages of industrialisation (1). As the compartmentalisation of the labour market by large firms progressed, however, occupational labour markets became less important, and this form of union organisation virtually disappeared.

Before we start to discuss collective bargaining systems, we must look briefly at employers' associations in Britain and Japan.

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(1) K. Koike, op. cit. pp. 279-83.

There are 1,350 employers' associations (listed by the Department of Employment and Productivity) in Britain. Many of these are local associations subordinate to the industry-wide federations of which they are members. The most important central organisation for employers is the Confederation of British Industry (CBI), which admits to membership employers' associations, trade associations, individual companies in productive industry and transport and the public corporations administering the nationalised industries. According to a CBI estimate, the 108 employers' associations in its membership represent companies whose employees amount to more than three quarters of all employees in the private sector of industry and transport (1). Like the TUC, the CBI has no formal binding power over its member associations. The Japanese counterpart of the CBI is Nikkeiren (Nihon Keieisha-dantai Renmei: the Confederation of Japanese Employers' Associations), which deals with labour issues as well as mangement problems in general but does not interfere in the autonomy of individual companies or local or industry-wide associations in its membership in handling industrial relations or other matters. This central body is composed of 47 indstry-wide, 8 regional, and 45 prefectural associations (1969), and the member companies affiliated to these associations number about 170,000 in all, though a considerable number of them are affiliated to both industry-wide and local associations so that the actual number of member companies may be much smaller than this figure. Like the CBI, Nikkeiren has no formal binding power over its affiliated

(1) Donovan Report (op. cit.), pp. 7-8.

associations or subordinate member companies. Japanese employers, like those in other countries, resist outside interference in their internal affairs and another, particularly Japanese reason, is that Nikkeiren and affiliated associations have adopted a 'trade-union containment' policy which is designed to limit the bargaining unit to each enterprise union. Although quasi-industry-wide collective bargaining has emerged in such industries as private railways, synthetic fibres, iron and steel, etc., and effective industry-wide bargaining has been practised in single-firm industries like Japan National Railways, most employers' associations do not have the power to conduct collective bargaining for their member companies in Japan (1).

2. Collective Bargaining Systems

The most important activity of a trade union is collective bargaining, in which it seeks a collective agreement with an employer or group of employers - a body of rules intended to regulate the terms of employment between individual employees and employers (2). All the other activities it undertakes are regarded as a by-product and auxiliary to this major activity. Of course, collective bargaining is not exclusively an activity of trade unions but is also conducted between informal groups of workers and an employer. The arrangements in which collective bargaining takes place in accordance with

(1) I. Ishida, "Keieisha-dantai no Soshiki to Kino", Gendai Rodo-mondai Koza vol. 4 (1967), pp. 308-21.

(2) A. Flanders, "Collective Bargaining: a theoretical analysis", British Journal of Industrial Relations, vol. 6, no. 1 (1968) pp. 1 - 26.

prescribed procedural rules may be called a "formal system" of collective bargaining, as against a "informal system" for ad hoc, impromptu collective bargaining. The informal system may be dominant where labour organisations, and thus a formal collective bargaining system, are underdeveloped. But in industrial countries, like Britain or the United States, where trade unions and a formal system of collective bargaining are well developed, the informal system remains important. This is related to the emergence of big trade unions organising a large number of workers of different types. 'It was previously suggested that the more comprehensive the alliance - the more inclusive of one's competitors and strategically situated collaborators - the greater is one's bargaining power.' (1) This is a basic incentive for a labour organisation to expand. 'But as more individuals and groups are brought within the combination, the more likely that members' aspirations will be divergent and competitive rather than common,' and 'The less homogeneous the members of the alliance, the greater the disagreement that is likely to emerge.' (2) This is also the case on the employers' side: an association of employers is a pluralistic, rather than unitary, system (3). Faction fights or other group conflicts emerge from the multiplicity of diverse interests of separate work groups and the functional and hierarchical conflicts of interest within management so that the determination of

(1) N.W. Chamberlain, "Determinants of Collective Bargaining Structure", in A.R. Weber (ed.), The Structure of Collective Bargaining (1961), pp. 3 - 10.
(2) Ibid.
(3) A. Fox, Industrial Sociology and Industrial Relations, Royal Commission on Trade Unions and Employers' Associations, Research Papers 3 (1966), Part 1, pp. 2 - 14.

priorities or 'internal bargaining' within the bargaining unit becomes more important than external bargaining between the trade union and management. The location of power - whether it is concentrated at the local, regional or national level - and its degree of concentration within the trade union structure is an important factor determining the pattern of collective bargaining. If the power locus is in the industrial federations of trade unions rather than in their affiliated unions, industry-wide bargaining obtains. If power is highly concentrated, the scope of informal bargaining by subordinate groups will be more limited.

The British system of collective bargaining has long been characterised by its national or industry-wide collective agreements between national leaders of trade unions and employers' associations. There is said to be about five hundred separate industry-wide negotiating arrangements in Britain for manual workers alone, although industry-wide agreements for white-collar workers are relatively rare (1). Where there are such arrangements, the white-collar unions almost invariably negotiate separately from the manual workers' unions. Maintenance workers' unions also negotiate separately from the unions of process or production workers.

Substantive industry-wide agreements, as distinguished from procedural agreements, usually lay down the length of the normal working week, regulations for overtime, week-end and shift working, and for statutory and annual holidays. Industry-wide

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(1) "Donovan Report" (op. cit.), p. 13.

agreements also regulate pay, but their provisions show a great deal of variety: 'Some fix only two time rates, one for skilled workers and another for unskilled, leaving individual firms to deal with intermediate and other grades. Others prescribe a list of different rates for a catalogue of different grades, with in addition a series of special additional payments for special duties or conditions of work. Some agreements make no provision for payment by results; others do so, but in different degrees of detail. Some describe their rates as minimum rates, other as standard rates.' (1)

Industry-wide bargaining presupposes the existence of industry-wide organisations capable of imposing their decisions on their members. In other words, such organisations must cover a substantial number of either employers or employees in the industry concerned and have power to make decisions which bind the latter. In this case, since affiliation to these organisations is voluntary, the source of their power or authority depends entirely on the willingness of their members to obey their decisions. In many British industries the majority of important companies are federated into one or more employers' associations and the 'non-federated' firms are usually small (2). The readiness of employers to federate does not, however, mean their willingness to hold closely to common regulation imposed by their associations. Not only do firms neglect the decisions of their associations but many of them also

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(1) ibid.
(2) ibid. p. 21.

allow their factory or workshop managers to settle matters in their own factories or workshops. Thus the authority of an employers' association increasingly attenuates as it goes down the organisational hierarchy, and the locus of power has shifted towards the factory or workshop level.

The other side in industry-wide bargaining is an industrial union or a group of trade unions allied on an industry-wide basis. But, as referred to earlier, there are not a sufficient number of industrial unions to meet the needs of numerous industries. Although one way of organising two or more trade unions which exist within the same industry, is an industrial federation, there are not a sufficient number of organisations of this type, either. (1) In order to make up for this situation and smooth the way for orderly industry-wide negotiations, many Joint Industrial Councils, in which representatives from different trade unions in the industry concerned jointly negotiate with employers' representatives, have been set up after recommendations by the Whitley Committee, in those industries and services where both employers and workpeople are adequately organised. (2) There were about 200 such councils in 1955 and they covered many important fields of employment like public administration, public utilities, transport other than railways, and a wide range of manufacturing industries (3), though some important industries such as engineering, shipbuilding, and iron and steel, have had their own ad hoc negotiating machinery at the national level (4). In

(1) There were 47 federations of trade unions in the U.K. at the end of 1969 (Source: Employment and Productivity Gazette).
(2) Ministry of Labour, Industrial Relations Handbook (1961), pp. 23-5.
(3) A. Flanders, op. cit. p. 87.
(4) Ministry of Labour, ibid., pp. 27, 34-5, 43-5.

those industries and services where 'no adequate machinery exists for the effective regulation of the remuneration of workers', Wages Councils have been established to fix minimum remuneration which is legally enforceable on all workers in the trade concerned (1). There were 54 wages councils at the end of 1969 and, taking into account agricultural workers covered by a similar system, the pay and other conditions of work of about four million workers were subject to statutory regulation in 1969. (2)

According to the TUC's estimate, five million employees are not covered by any agreements on pay and another million are covered mainly by company agreements. Of the remainder, there are four million in Wages Council industries, seven million in those industries in which industry-wide agreements are closely followed at company and local level, and six million in those industries with industry-wide agreements where bargaining within companies has an important influence on actual earnings. (3) On the whole, the pay of three quarters of Britain's 24 million employees was to a greater or lesser extent influenced by industry-wide agreements or minimum remuneration fixed by Wages Councils. The degree to which industry-wide agreements determine actual earnings levels is, however, much smaller than might be expected from this figure and indeed the influence of such agreements has been diminishing, because they mainly concern

(1) Ministry of Labour, op. cit., pp. 155-67.
(2) Employment and Productivity Gazette.
(3) "Donovan Report" (op. cit.), p. 37.

'basic rates', leaving other components of earnings or labour costs to determination through workshop bargaining, management discretion or statutory regulation. Even these 'basic rates' are often minima, which are exceeded by actual rates determined at company or factory level in many private industries.

The effective regulation of pay levels by industry-wide agreements is now largely confined to the public sector (1). Although before the Second World War the divergence between agreed rates and actual earnings, or "wage drift", was very modest and industry-wide agreements were generally assumed to be able to provide almost all necessary joint regulation, leaving only minor issues to be settled by individual managers, actual earnings levels have risen far more rapidly than nationally negotiated wage rates after the war in Britain (2). That means that the extent to which industry-wide agreements determine actual pay has declined. Moreover, the three major sources of wage drift, namely, piecework or incentive earnings, company or factory additions to basic rates, and overtime earnings, (3) are not so much regulated by industry-wide agreements as derived from workshop bargaining, customs and practice, or managers' discretion at company or factory level. On the whole, authority in collective bargaining has been transferred from the industry to company or factory level, but this process of decentralisation of authority is not yet complete. As a result, there is some overlap in the coverage of subjects by industry-wide and workshop bargaining. In countries which have a centralised

(1) "Donovan Report" (op. cit.) p. 339 (Appendix 5).
(2) Ibid., p. 14.
(3) E.H. Phelps Brown, op. cit.

system of collective bargaining, an informal system inevitably develops at company or factory level because the formal system embodied in official institutions as national bargaining cannot cover all subjects which may vary between companies or factories but leaves minor issues to the informal system. In such a case, the jurisdiction of the two systems over subjects to deal with must be demarcated beforehand. Otherwise they may enter into conflict with, rather than complement, each other. This has happened in Britain. In addition, spontaneous workplace bargaining in Britain is fragmented and autonomous, which has resulted in competitive sectional wage adjustments and disorderly pay structures. Thus the British informal system undermines the regulative effect of industry-wide agreements. Consequently wage drift arises from this dual structure of collective bargaining in Britain.

As we can expect from her trade union structure, the Japanese system of collective bargaining is generally more decentralised than in Western countries. We have already mentioned that civil servants, either national or local, are denied the fundamental rights of workers to act collectively except the right to organise, and that employees of public corporations, Postal Service, and local public enterprises are deprived of the right to strike, though these employees have other rights of workers. Even the latter's right to bargain collectively is largely nominal as the financial management of these organisations is under governmental control and the discretion of employers in settling wage bargains is limited. Consequently wages disputes there are eventually settled through conciliation or arbitration

by the Public Corporation and National Enterprise Labour Relations Commission in most cases (1). In such private industries as transport, electricity, gas and water and the health service the use of the right to strike is strictly restricted by legislation and consequently industrial disputes in these industries and services are often referred to central or local Labour Relations Commissions for conciliation or arbitration rather than settled through voluntary collective bargaining (2). Even in other private industries and services the extent to which trade unions and employers depend on conciliations or arbitrations by the third party for the settlement of industrial disputes is great in Japan: out of 3,051 industrial disputes which took place in 1965, 1,695 (56 per cent) were settled at either central or local Labour Relations Commissions (3). This figure is remarkably large, as compared with less than one per cent attributed to arbitration and mediation and 76 per cent to voluntary negotiations as methods of settlement of wage disputes in 1966 in Britain (4). Taking everything into consideration, those employees whose pay is determined through voluntary negotiations are 26 per cent of the whole and those through statutory regulation (including 15 per cent covered by statutory minimum wages as well as 14 per cent in the public sector), 29 per cent, while the remaining employees (45 per cent) negotiate individually with employers for their

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(1) K. Kamishiro, "Dantai-kosho to Sogi", in T. Shirai (ed.), op. cit., pp. 217-24.
(2) See The Labour Relations Adjustment Act (1946), articles 37-8.
(3) Central Labour Relations Commission Secretariat, Zenkokuteki Rodosogi-chosei Jitai no Kenkyu, vol. II (1966), pp. 555.
(4) Employment and Productivity Gazette.

pay and conditions of work (1). Thus the pay of nearly half of the Japanese employees, as compared with one quarter in Britain, are outside the collective bargaining system or statutory regulation.

The Japanese system of collective bargaining is characterised by enterprise-wide bargaining. Enterprise-wide bargaining is not peculiar to the Japanese system. For example, company or plant bargaining is quite common in the United States (2). What is peculiar to the Japanese system is that, with few exceptions, every enterprise union and management have perfect autonomy in collective bargaining. Of course, in the United States, this form of bargaining does exist but 'multi-employer bargaining' or that single-company bargaining in which national union representatives take part seems to be commoner (3). Further, the authority of local or industry-wide organisations over either workers or employers, or their further superstructures, is very much weaker in Japan than in Britain and the United States. The reasons for the prevalence of enterprise-wide bargaining are muc the same as those for the development of enterprise unions: absence of occupational labour markets, lack of labour mobility between large firms, development of internal labour markets, great inter-firm differences in productivity and wages, and so on. In the highly fragmented labour markets there is not so much in common between unions, nor incentive for closer trade union unity. Under the Japanese employment system, the worker does not consider so

(1) K. Kamishiro, op. cit. p. 220.
(2) L.G. Reynolds, op. cit. pp. 160-74.
(3) ibid.

much as his British or American counterpart that other workers of the same type in the external labour market are competitors. Moreover, Japanese employers have preferred enterprise bargaining, or endeavoured to confine bargaining units to enterprise unions, because they fear that industry-wide bargaining may undermine their paternalistic management and the viability of the less efficient firms which depend on cheaper labour. Enterprise bargaining may give unions of prosperous firms some advantages: these unions can push their firm to pay higher wages than the average in the industry (in this case, faced with threats of stoppages, the firm may not resist their demands so much). On the other hand, enterprise unions may have many disadvantages particularly in developing effective union leadership. This springs from the fact that in most collective agreements there is a provision that officials of a given enterprise union must be employees of the firm from which the union draws its members, and that the majority of full-time officials of the enterprise union, who are released from the job for a certain period of office in the union, are reinstated by management later (1). Because of this, a limited membership and a lack of union funds, it is difficult for the union to obtain good leadership and expert negotiators or specialists in union affairs and to conduct prolonged strikes or other industrial action (2), which may adversely affect the bargaining strength of the union; and so forth.

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(1) T. Shirai, "Union Leaders", Gendai Rodo-mondai Koza, vol. 4, (1967), pp. 222-30.
(2) N. Naito, "Kumiai Zaisei", ibid., pp. 233 - 41.

Since 1955 there has occurred a great change in the Japanese system of collective bargaining, though enterprise bargaining is still most important. This is a tendency towards industry-wide bargaining among major industrial federations of trade unions in Japan. In the spring of that year, eight major industrial federations affiliated to Sohyo started a united front for wage increases and took concerted action in wage claims to employers. This united front of industrial federations has been organised every spring (therefore called "spring offensive") and drawn in more and more industrial federations not only from within Sohyo but also from among those affiliated to other central bodies such as Churitsuroren. As a result, trade unions which cover more than 80 per cent of all trade unionists in Japan have come to take part in a spring offensive and present wage demands simultaneously and in a more or less concerted manner (1). This pattern of synchronised wage negotiations by multiple enterprise unions - which may be called "wage rounds" - is still far from industry-wide bargaining, for major unions in each industrial federation do try to coordinate and standardise wage targets and timing of the submission of their wage claims or industrial action but are in no way liable to follow the prearranged pattern by all means (2).

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(1) The percentage of those unionised firms which awarded general wage increases during the period between April and June was 83 per cent for firms with 1000 employees or more, and more than 70 per cent for smaller firms, while the proportion was lower for non-union firms (65% for firms with 1000 employees or more and 47% for smaller firms), in 1969. This is, however, not all due to spring offensives for Japanese firms traditionally give workers periodic wage increases in springtime every year and alter the starting pay for school-leavers during the same period (Source: Ministry of Labour).

(2) In some industries like shipping, coalmining, private railways, etc., industry-wide agreements have been concluded between industrial union or federations of enterprise unions and industry-wide employers' associations (See W. Fujita, "Nihonteki Roshi-kosho no Tokushitsu", ibid., pp. 110 - 21.

Nevertheless, the size of wage advance obtained has a tendency towards uniformity among them (1).

One interesting thing is that a phenomenon (called "point struggles") similar to "pattern bargaining" in the United States has taken place in the Japanese setting. In the synthetic chemical industry, for example, one leading firm is singled out by the industrial federation, or tansan, as the initial target in a particular year; after negotiations are completed, the amount of wage increase settled there becomes a pattern for bargaining at other firms in the industry (2). Such a phenomenon is also observed between large firms of different industries: one leading industry is singled out by a national centre like Sohyo as the initial target in a particular year and the amount of wage increase settled there becomes a pattern for bargaining at large firms of other industries. Iron and steel, private railways, chemicals, etc. have been "wage leaders" in this sense in recent years. The number of large firms which determine wage increases for their employees after taking into account wage settlements at other large firms within the industry or outside has been increasing and today, most large firms refer to wage settlement at other firms before determining their own (3). It seems, therefore, that wage

(1) Ministry of Labour, Rodo Hakusho (1970), p. 109. It shows that the mean coefficient of variation in the size of wage advance among large firms steadily declined from 46.3 in 1955 to 14.0 in 1969.

(2) W. Fujita, op. cit. p. 119.

(3) More than 80 per cent of firms with 500 employees or more first referred to wage settlement, wage level, etc. of other firms in same industry but 90 per cent of them also took into account those of firms of other industries secondarily (Source: Ministry of Labour, Survey on wage increases, etc.)

movements between industries as well as between firms within the same industry have become increasingly interdependent in Japan.

Under the British system, industry-wide negotiations centre on wage rates, and other forms of wage payment like payment by results may,or may not, be dealt with secondarily. In Japan, it is the average wage of employees working in the particular firm (commonly called "base wage") rather than wage for particular grades or types of workers, that is brought into focus in union-management negotiations. (1) When unions in a particular industry organise a common front in wage bargaining in a spring offensive, they usually coordinate their wage demands and place with each employer claims for an amount of advance in the base wage that is equal for all participating unions. After the amount of advance in the base wage is fixed at industry level, each union participating in the common front may separately hold further negotiations with management for additions (commonly called "plus alpha") to this industry-level outcome. An overall advance in the base wage does not mean, however, that all employees working in the firm concerned receive an equal wage increase in either absolute or percentage terms, so that additional negotiations are required to settle another issue of how this overall advance in the base wage should be shared among the employees or in other words, how much the wages of particular workers should be

(1) Out of about 3,800 industrial disputes having occurred in 1968, 52 per cent were mainly concerned with wage advances, 26 per cent, with biannual bonuses, and 3 per cent, with retirement allowances or other fringe benefits (Source: Ministry of Labour).

raised against those of other workers in the same firm. A little more than one quarter of all enterprise unions which struck wage bargains left the matter to management's discretion; nearly half of them decided only the principles of distribution of wage advances; and the remaining quarter laid down detailed provisions for the method of sharing wage advances among the individual workers. (1) The commonest methods of doing so are equal-amount wage advances (nearly 50 per cent of the unions which struck agreements concerning the distribution of wage advances), or equal-percentage wage advances (35 per cent), for all workers (2). In these negotiations management endeavours to increase that part of wages which is directly related to merit-rating or other methods of employee assessment, while the union tries to avoid internal conflicts between different groups of affiliated members which compete with one another for a larger share. Uniform wage advances for all workers, though commonest so far, have sometimes engendered discontent amongst higher-paid workers in Japan, as has been the case in Britain.

Lastly, we must take a cursory look to the statutory minimum wage system in Japan. At the end of 1969 there were about 8 million workers whose wages were subject to regulation by this system. They were mainly concentrated in low-wage industries and services although even among the highest-wage industries like petroleum and coal products, chemicals, printing and publishing,

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(1) Ministry of Labour, op. cit.
(2) Ibid.

there were underpaid workers who were covered by statutory wage regulation). 80 per cent of all workers of this category were in manufacturing (3 million in metal manufacture and engineering and 1.4 million in textiles). (1) There are two kinds of minimum wages - one is determined by a minimum wage council (which is composed of representatives of workers and employers and independent members and established permanently in every prefecture but not separately for individual trades, as with British wages councils) and another is based on agreements between employers in particular industries (this formula will soon be abolished) (2). Besides the difference in the organisation of wages councils or minimum wage councils, one fundamental difference is that in Britain, a Wages Council may be established if 'there is no adequate machinery for the effective regulation of the remuneration of any workers' (3), in other words, if a particular trade is not adequately organised, while in Japan a minimum wage may be determined for a particular industry, trade or area if the Minister of Labour, or the head of a prefectural labour standards bureau, is of the opinion that it is necessary for the improvement of the working conditions of low-wage workers (4). In Japan, even if an industry as a whole is well organised, it does not follow that the collective bargaining machinery effectively regulates the wages of all workers in the industry: the wages of workers employed at small firms and casual workers employed at large (well-organised

(1) All figures from Ministry of Labour, Labour Standards Bureau.
(2) The Minimum Wages Act(1968), articles 26-9 and a previous Act (1959) articles 9-10.
(3) Ministry of Labour (U.K.), op. cit. p. 155.
(4) The Minimum Wages Act (1968) article 16.

and high-wage) firms in the industry are outside the regulation of collective agreements because large-firm unions are reluctant to admit these workers to their membership and collective agreements are struck on an enterprise-wide basis.

3. Impact of Trade Unionism on Wages

The contention that trade unions raise the wage level above that which would otherwise be determined by market forces is the crux of the cost-push inflation argument. There have been much theoretical controversy surrounding the relationship between union power and wage determination as well as many attempts to test the impact of trade unionism on wages empirically since before the Second World War. P.H. Douglas and other American students in the prewar days, who questioned whether unionisation and industrial concentration distorted the interindustry wage structure, tested the relationship between industry wage increases and unionisation (or productivity growth) by statistical methods (1). Immediately after the war, J.T. Dunlop and A.M. Ross put forward two conflicting hypotheses concerning wage determination under collective bargaining (namely, Dunlop's wage-employment maximization model and Ross's political model), which raised so-called "the Dunlop-Ross controversy" among the students of the subject (2). This controversy gave an impetus to further empirical studies on the determinants of the interindustry wage structure.

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(1) P.H. Douglas, op. cit. Also see Chapter 5 pp. 114-9.
(2) For a good summary of this controversy, see H.M. Levinson, op. cit.

H.M. Levinson summarised the results of these studies as follows: (i) '.... greater union strength (as measured by the proportion of production workers covered by collective bargaining agreements) was associated with relative wage advantages ...'; (ii) '... certain characteristics of the product market - particularly, the 'degree of monopoly' (as measured by the concentration ratio) and the level of profits - were also associated both with the rate of change in wages and with union strength.'; (iii) '... conditions in the labour market, as measured by rates of change in employment or in physical productivity, were less clearly associated with changes in the inter-industry wage structure than were the product market variables.' (1). In this context the most important conclusion he drew from those is that 'unionism did appear as an important force influencing the rate of change of wages ...' (2). O. Eckstein and T.A. Wilson, after examining the behaviour of wages in American manufacturing industry from 1948 to 1960, found 'only weak evidence that unionization affects the long-run level of wages,' though they did not deny the presence of a trade union effect on wages, either, for a reason mentioned later (3). A.G. Hines, who investigated the relationship between the rate of change of money wage rates and the rate of change of the percentage of the labour force unionised, in the United Kingdom during the periods 1893-1912, 1921-38 and 1949-61, concluded that 'an index of trade union pushfulness, namely the rate of change of unionization, is closely

(1) ibid. (The underlines are originally in italics).
(2) ibid.
(3) "The Determination of Money Wages in American Industry", Quarterly Journal of Economics, vol. 76 (1962) pp. 379-414.

associated with the rate of change of money wages rates' and that 'moreover, this index cannot be explained by the level and/or the rate of change of the demand for labour.' (1)

We have examined the relationships between the overall rate of increase in earnings (Δ W) and union density (T, the percentage of employees in trade unions), between W and the rate of change in union density (Δ T), and between Δ T and the rate of unemployment (Δ U) during the last decade or so in the United Kingdom and Japan. Our conclusions are as follows: Δ W is positively associated with both T ($r = 0.3622$) and Δ T ($r = 0.4750$) in the U.K., while Δ W is negatively associated with T ($r = -0.4898$) and positively with Δ T ($r = 0.3697$) in Japan: partly contrary to a Hines' conclusion, there is a positive correlation between Δ T and Δ U ($r = 0.4190$) in Britain, while the two variables are negatively associated ($r = 0.3745$) in Japan (2). In the case of Britain, as both the unemployment rate and rate of increase in union density increase, the rate of wage increase also rises, whereas in the case of Japan, as unemployment rate declines and the rate of increase in union density rises, the rate of wage increase rises. We may say, therefore, that trade unions are likely to have pushed up wages despite adverse labour-market conditions in Britain but we cannot say so for Japan. We are inclined to think that full employment has been conducive to increases in both union density and wages in Japan because the increases in trade-union membership have mainly taken place among the employees working at smaller firms in recent years and small-firm unions have several weaknesses in terms of "pure power," which will be discussed

(1) "Trade Unions and Wage Inflation in the United Kingdom 1893-1961", Review of Economic Studies, 31 (1964), pp. 221-51.
(2) For statistical data used, see Appendices X and X1.

at the end of this Chapter. We have also investigated the relationship between the industry wage level and union density in fourteen British industries and services, and in twenty Japanese industries and services (1). There is a weak positive correlation between the industry wage level and union density in Britain in 1968 ($r = 0.2536$), while the correlation between the two variables is negative in Japan in 1967 ($r = -0.4721$). In addition, there is also a negative correlation between the industry rate of wage increase (over the period 1958-69) and industry union density (in 1967) in Japan ($r = -0.3189$). On the whole, the role of trade unions seems to be much stronger in Britain than in Japan where union density is not a good explanatory variable for the overall rate of wage increase and the industry wage level at all. We may go the length of saying that trade unions are irrelevant to wage movements in Japan as far as union density is concerned.

There may be two objections to testing the effect of trade unions on wages by union density and interindustry comparison. One was made by S.H. Slichter: a method of testing the effect of unions by interindustry comparison of wage movements and union density (or other measures of union power) 'breaks down in those times when unions exert great influence on the wages of nonunion workers' (through spill-over effects of wage patterns) (2). In other words, 'because of the spillovers, any wages increases caused by unionisation would permeate much of the rest of the wage structure in other industries

(1) For statistical data used, see Appendices XII and XIII.
(2) S.H. Slichter, op. cit.

and, therefore, would not appear in cross-section comparison.' (1) Another was already made by many students of the subject in relation to the significance of union density as a measure of union power or pushfulness. 'This measure of union power may be seriously deficient if (i) the union membership itself lacks the militancy necessary to vote in favor of a strike or to remain out after a strike is called, (ii) a substantial minority of employees are not union members and are not prepared to support any union action, or(iii) the union leadership is itself unwilling for some reason to initiate aggressive action.' (2)

The first point has been developed further by Levinson, Eckstein and Wilson, and others. In the United States contracts have been negotiated between unions and employers in a series of "wage rounds" which range from one to four years. In each wage round leading unions in a group of heavy industries (called "the key group") first set a wage pattern in the "key bargains" and other unions in the group subsequently tend to follow this pattern settlement because of the economic, political and institutional interdependence among the firms and the unions in the group (3). As a result wages in the key group move almost identically. Wages in other industries outside the group are also subject to spill-over effects of the key-group wages (4). Thus wages settled at different places are linked with one another. One thing to be noted here is that interdependence of wage movements between firms in a given industry or between

(1) O. Eckstein and T.A. Wilson, op. cit.
(2) H.M. Levinson, op. cit.
(3) O. Eckstein and T.A. Wilson, op. cit.
(4) ibid.

industries is not necessarily due to union pressures but may also result from input-output connections, full employment and increased labour mobility, etc. In Japan a wage round (what we called "spring offensive") takes place every year and, as we have mentioned earlier, there is some evidence that interdependence in wage determination among the large firms has increased. In the present writer's view, this phenomenon in Japan can better be explained by what Levinson called "political variables" (like union rivalry, the prestige of union leaders, etc.) than by labour-market factors because labour mobility between large firms is still very limited there and rivalry between national centres with different political outlook such as Sohyo and Domei is fierce, particularly where they each affiliate separate unions in the same firm or in the same industry and compete for membership.

Although we have pointed out that inter-firm dispersion in the size of wage advance obtained through negotiations has tended to shrink in recent years, this phenomenon has been limited to large firms and has not led to uniformity in the rate of wage increase among them because there have previously existed wide differences in the wage level between firms in Japan: that is to say, if the size of wage advance obtained through bargaining is the same among the firms, it follows that those firms which originally have a higher wage level award smaller percentage wage increases than those which have a lower wage level, and consequently inter-firm differentials decline in percentage

terms (1). On the other hand, the spill-over effects of wage settlements for large firms on the wages of smaller firms are still faint at the moment. About 40 per cent of the firms with 30-99 employees in manufacturing industry and distributive trades took no account of the wages of other firms in determining their own and only 21 per cent of them referred to wage advances at other firms (2). The wage determination of small firms is, therefore, more individualistic. Again, many small firms determined wage rises for their own employees well before large firms did. (3) As a result, inter-firm wage dispersion is very much wider among the small firms that among the large firms (4). Wage determination at small firms is thus more influenced by the conditions of the labour market, for example, changes in the starting wages of school-leavers. We may conclude that the spill-over effects of wage advances or interdependence of wage

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(1) For example, suppose that Enterprise Unions A, B, and C all demand a uniform amount of wage advance (say, 10,000 yen) and Firms A, B, and C originally have a different wage level (say, 40,000 yen for A, 50,000 yen for B, and 60,000 yen for C); then, the rate of wage increase will be 25% for A, 20% for B, and 16.7% for C; and, if we take the wage level of Firm A as a base, the original differentials are 100 for A, 125 for B, and 150 for C and those after wage settlement will be 100 for A, 120 for B, and 140 for C but the absolute difference between the firms will be the same (i.e. 10,000 yen) as before.

(2) Ministry of Labour, Rodo Hakusho (1970), p. 115.

(3) The large firms which struck wage bargains before the middle of April were only 13 per cent of the whole, while 64 per cent of the nonunion small firms and 36 per cent of unionised small firms did, in 1969 (Source: Nihon Seisansei Honbu).

(4) The coefficients of variation ($\frac{1}{2}$ (the highest decile minus the lowest decile) divided by the median multiplied by 100) in wage increases in manufacturing are 66.7 for firms with 30-99 employees and 24.5 for firms with 1000employees or more (Source: Ministry of Labour, ibid., p. 154).

movements are still limited to wage determination at large firms and that many firms, especially small ones still determine their own wage level without interference from trade unions. This is true of even unionised small firms: a considerable number of small-firm unions do not have any collective agreements with their employers because of the latter's refusal for union recognition or otherwise, so that these employers are free from union intervention (1).

Lastly, the role of what Levinson called "pure power" variables seems to be less important in Japan than in Britain or the United States, for several reasons. First, Japanese employees working in the large firms have strong loyalty or attachment to their employer which may have deliberately been developed through paternalistic management by the latter, but at the same time they also identify themselves with the union at their firm (2). This attitude of the workers towards their employer and enterprise union (which may be called "dual allegiance") probably arises from their view that their company and company union are part of the company community to which they belong, as against organisations outside. Under such circumstances the militancy of union membership generally moderates. Secondly, workers of older generations may feel more attached to their company than to their union and may not be prepared to support any aggressive union action, which weakens

(1) More than 40 per cent of the unionists who belonged to small unions (with a membership below 100) were not covered by collective agreements (Ministry of Labour, Trade Union Basic Survey).

(2) See H. Hazama, "Rodosha no Kigyo-ishiki to Kumiai-ishiki", Gendai Rodo-mondai Koza, vol. 4 (1967), pp. 182-96.

the internal strength of the union. Thirdly, union leadership is weak for the reasons which we mentioned earlier. Financial vulnerability and lack of funds due to the smallness of union size makes it difficult to conduct prolonged strikes. In this connection A.M. Ross pointed out, after making international comparison of strikes, that the Japanese pattern of industrial conflict was characterised by a high propensity to strike and short duration of strikes, as compared with a moderate propensity to strike and moderate duration in the United Kingdom (1). But, if we exclude the strikes against mass redundancy which are really furious and prolonged, more than 60 per cent of strikes were called off within four hours in Japan (2) so that the average duration of strikes would ver very much shorter. Taking everything into account, the pushfulness of Japanese trade unions may be much weaker than that of British unions.

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(1) "Changing Patterns of Industrial Conflict", in G.G. Somers (ed.) Proceedings of the 12th Annual Meeting of the Industrial Relations Research Association, 1959.

(2) Source: Trade Union Basic Survey.

CHAPTER 8

THE IMPACT OF MARKET FORCES ON WAGES

It is a central postulate of classical economic theory that wages are determined by the interaction of labour supply and demand in the market. But doubt has been cast on this postulate by many modern labour economists, particularly after the Great Depression of the 1930's. One most widely supported assertion is that wages are determined in collective bargaining between trade unions and employers. Another, sociological explanation, is that wages are determined by the social status of the worker. We have so far discussed the wage-fixing process in Britain and Japan from these points of view. Now we return to the supply-demand postulate once again and look at the relationship between actual wage movements and changes in the labour market conditions in both countries.

1. Labour Supply

The labour supply (measured in terms of the number of workers) depends on population size and its activity rate. Apart from emigration and immigration, the population size of a country is in the long run determined by the rate of population growth. Since the beginning of this century, Britain's rate of population growth has been fairly stable and much lower than that of Japan, though the

latter has fallen in the last fifteen years (1). The activity rate of a given population varies with its age structure and is affected by economic and social factors such as the per-capita income level, industrial structure, attitudes towards female labour participation, the average period of education for young people, the social security system, the retirement age of older workers, etc. The overall activity rate has had a declining tendency in the long run, though the activity rate for married women has increased, in most industrial countries due to ageing population structure, prolonged education for young people, rising income level, etc. (2). As a result, the rate of increase in the labour force is expected to decline in the long run in both Britain and Japan. The British labour force increased only at a rate of 0.5 per cent per annum during 1960-67, as compared to an annual rate of growth in Japan of 1.4 per cent over 1960-68 (3).

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(1) Average annual rate of population growth

	U.K.	Japan
1920-25	0.6	1.31
1925-30	0.4	1.53
1930-35	0.5	1.45
1935-40	0.6	0.76
1940-45	0.4	0.22
1945-50	0.9	2.89
1950-55	0.3	1.42
1955-60	0.4	0.91
1960-65	0.8	0.99
1965-69	0.5	1.10

Source: UN Demographic Yearbook and Statistical Handbook of Japan.

(2) Labour force as percentage of total population aged 15 years and over : 63 per cent in 1950 and 61 per cent in 1968 in the U.K.;
: 71 per cent in 1950 and 66 per cent in 1969 in Japan.
Source: Employment and Productivity Gazette and Yearbook of Labour Statistics.

(3) Source: Employment and Productivity Gazette and Labour Force Survey (Bureau of Statistics, Prime Minister's Office).

Widening our analysis, we have also to consider the effectiveness with which the labour supply is used. Underemployment, a particularly serious problem in countries with a large agricultural population, can be a source of labour for growing industries. There may be absolute underemployment in the sense that to remove some workers from a sector of the economy will not affect production but result in an increase in the average productivity of the remaining workers in the sector. This actually happened in post-war Japan: the farm labour force diminished from 16 million to less than 10 million, while the annual production of rice increased from 12 million to 14 million tons, during 1955-1968. Relative underemployment is found among those workers whose productivity is extremely low, as compared with that of other workers in other sectors of the economy, and the transfer of whom to other sectors may reduce the present level of production in the original sector but increase their productivity and thus the average labour productivity of the national economy as a whole. As the industrial structure changes, this type of underemployment occurs again and again even in advanced industrial economies because of limited labour mobility. It seems that large-scale absolute under-employment has almost been eliminated in Britain where agricultural workers have constituted only a small fragment of her total working population and the proportion of self-employed and unpaid family workers has been small (1). Self-employment and unpaid family

(1) The proportion of the farm labour force was 9.4% in 1911, 6.1% in 1931, 5.0% in 1950, and 3.5% in 1964 (Source: L.C. Hunter and D.J. Robertson, op. cit. p. 161, Table 6.5).
The proportion of self-employed persons and employers in total working population was 13% in 1931 and 6.8% in 1966. Family workers were 176,000, or only 0.7% of the labour force in 1966. (Source: Annual Abstract of Statistics).

employment are often refuges of surplus labour in less developed countries where the labour market is underdeveloped and the social security system, like unemployment benefits, is poor so that many of the jobless cannot afford to stay out of work until job opportunities in paid employment present themselves but are obliged to earn a livelihood as petty self-employed or unpaid family workers. In the family enterprise (in agriculture or other industries) which has not employees the principle of average productivity usually applies rather than the capitalistic principle of marginal productivity: Even if the marginal value productivity of an additional family member falls below the current wage level (probably living wages) or is even equal to zero, the family enterprise will employ him or her as long as the average value productivity of all family members is above the current wage level and no alternative job is available. Under such circumstances the result is disguised unemployment and, if jobs are available in the local labour market area and wages for them are above the marginal value productivity of some family members, they will take up a job outside the family business at low wages which may not be sufficient even to support themselves but still make their family as a whole better off. In many Japanese agricultural households male members take up other jobs and female members run their farm because the earnings of male members are not sufficient to support their household, although considerably higher than the incomes which they would get if they worked on the farm (1). In brief, low wages in industry and

(1) Those households which lived exclusively on farming were 21 per cent of Japan's 5.4 million farm households in 1967 (Source: Ministry of Agriculture and Forestry).

low incomes from agriculture complement one another. From another point of view industry in the rural area can attract labour from agriculture even at below-subsistence wages.

The underemployed are seldom registered as unemployed in the official statistics. For example, the number of jobless people has been larger in the United States than in India whose labour-force size is more than double that of the United States and whose per-capita income is almost at subsistence level (1). Despite the repeated assertion that there was abundant labour surplus in Japan, her unemployment rate has been much the same as that of Britain which has experienced labour shortages since the Second World War. This can be accounted for by the fact that self-employment and unpaid family work in agriculture, industry, and services have given shelter to the potentially unemployed in Japan. The proportion of working population in agricultural employment was as high as nearly 40 per cent in 1955 (18 per cent in 1968) and self-employed persons and unpaid family workers amounted to 25 per cent and 31 per cent respectively in 1955 (19.5 per cent and 16.5 per cent in 1969) (2). Moreover, the number of self-employed persons has remained almost constant since the beginning of the 1950's, though their distribution has greatly shifted from agriculture to other industries and services (3). The

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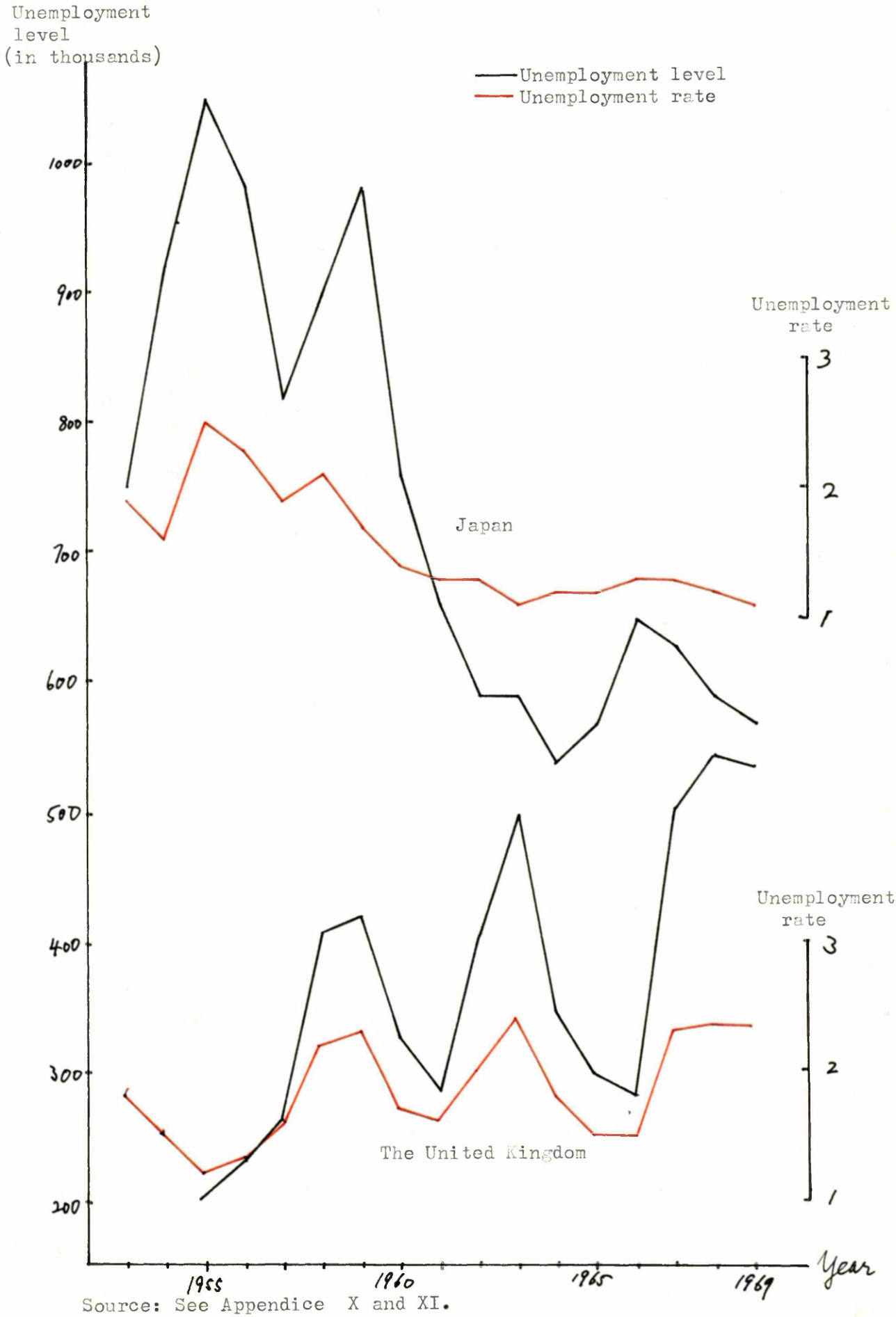
(1) Source: ILO, Year Book of Labour Statistics.

(2) Source: Labour Force Survey.

(3) The number of self-employed persons was 9,910,000 in 1953 and 9,930,000 in 1969 (Source: Labour Force Surey).

Figure 8 - 1

Unemployment level and rate in Britain and Japan



Source: See Appendice X and XI.

probability of underemployment among the self-employed and family workers in developing countries is supported by the fact that the average incomes of these workers are well below those of employees in developing countries, while the opposite is true of advanced industrial countries (1). Again we have other evidences that many of the self-employed and family workers are underemployed in Japan (2). The shift of manpower from agriculture and unpaid family labour in other industries and services to paid employment in growing industries during the last decade or so in Japan was tremendous (3). Taking into account this interindustry transfer of labour and greater increases in the labour force by way of the entry or re-entry of new school-leavers and housewives, Japanese industry and service have been far more amply supplied with manpower than British counterparts since the Second World War. Even now a large labour reserve remains in the form of relative underemployment, though there is little absolute underemployment or unemployment, in Japan (4).

(1) The ratio of the average wages and salaries of employees to the average incomes of total occupied population is between 0.7 and 0.8 in Western European countries, as compared with over 1.0 in developing countries and 0.9 in Japan (Source: N. Maruo, "Seisansei, Chingin, Rijun", Gendai Rodo-mondai Koza, vol. 2 (1967), p. 226).

(2) Other indirect indicators are (i) that 22 per cent of all self-employed and 30 per cent of the family workers, as compared with only 5 per cent of all employees, worked less than 200 days during the year 1968; and (ii) that the lower-quartile annual incomes for the self-employed were 220,000 yen, while those for the employees were 308,000 yen in 1968, that is to say, there were more low-income-earners among the self-employed than among the employees (Source: Employment Status Survey).

(3) S. Tankanashi, "Rodoshijo no Henbo to Koyo-seisaku", Gendai Rodo-mondai Koza, vol. 1 (1966), pp. 14-20.

(4) The number of those workers who wished to change jobs, or to get additional work, or those people who wished to take up a job was 2.5 million, 1.8 million, and 4.1 million in 1958; and 1.9 million, 0.9 million, and 5.7 million in 1968 respectively. Above all, those who wished to participate in the labour force increased in recent years (Source: Employment Status Survey).

2. Labour Demand

The level of demand for labour may rise with economic growth but at a slower pace allowing for improvements in labour productivity, which are often induced by labour shortages (and rises in the wage level) resulting from economic expansion. As we have seen in Chapter 2, Japan's rate of economic growth was more than four times as high as that of Britain in real terms during the last two decades. In both countries the most important source of growth of national product is attributable to improvements in labour productivity. To put it in another way, the increase of labour demand

Talbe 8 - 1

Average Annual Rates of Increase in the labour force and labour productivity as factors contributing to economic growth

	U.K.	Japn.	
	1961 - 67	1960 - 65	1965 - 68
Rate of economic growth (real GNP)	2.5%	10.0%	12.4%
Rate of increase in labour force	0.4	1.3	1.9
Rate of labour productivity growth	2.0	8.6	10.5

Source: Rodo Hakusho (1971), p. 171.

was very much slower than output expansion. Incidentally, the average national productivity of labour can be raised to a considerable extent through the transfer of labour from low-productivity to high-productivity sectors of the national economy. The average productivity of Japanese workers rose at an annual rate of 1.4 per cent between 1960-68 simply owing to inter-industry labour mobility,

while productivity increments due to this factor was negative during 1960-67 in Britain, i.e. the transfer of labour from high-productivity to low-productivity sectors reduced the average national productivity of labour at an annual rate of 0.2 per cent, though productivity improvements within each industry more than offset it. (1).

Total labour demand is an aggregate of labour demands by different sectors of the economy. The intensity of demand pressures differs from one industry to another: some industries expand employment, while others make their workers redundant. The characteristics of the British employment structure, as compared with the Japanese counterpart, are (i) that the size of the agricultural labour force is extremely small in both absolute and percentage terms; (ii) the proportions of manufacturing and service industries (including the public servies) are much larger than in Japan.

Table 8 - 2

Industrial Composition of Labour Force, 1968

	U.K.	Japan
Total	100.0	100.0
Agriculture, forestry & fishing	1.8	22.1
Mining and quarrying	2.1	0.6
Manufacturing	38.4	25.8
Construction	6.6	7.9
Transport and communication	7.0	6.0
Gas, electricity, and water	1.8	
Distributive trades	12.2	18.2
Finance, banking, and services other than public services	24.0	16.2
Public services	6.2	3.0

Source: Employment and Productivity Gazette and Employment Status Survey.

(1) Rodo Hakusho (1970), p. 171.

Basic trends in the pattern of employment are similar between the two countries in many ways, for example, rapid contractions in agriculture and mining, and expansions in metal and engineering industries. There are also some differences: employment in old industries like textiles and clothing has declined in absolute terms in Britain, but increased, though more slowly than other industries, in Japan; construction and distributive trades are among the fastest-expanding industries in Japan but fairly stable in Britain, in terms of the size of employment. The expansion of employment occurred over all industries and services save agriculture and mining and more than absorbed abundant supply of labour during the last decade or so in Japan. Partial labour shortages which appeared towards the end of the 1950's have developed into general ones in more recent years (1).

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(1) Today, in Japan, full employment and general labour shortage are apparent in the sense that almost all workers are in employment and that many firms want to hire more labour at the current wages. This does not, however, mean that all workers are effectively and fully used. As mentioned earlier, there is a great deal of relative underemployment: Many workers, particularly in the traditional sector, are employed at very low wages, as compared to workers in the modern sector, and their productivity is also low, so that they can more effectively be used if they are moved to a more productive sector.

Table 8 - 3

Employment Index by Industry

	U.K. 1959 - 68 (1959 = 100)	Japan 1958 - 69 (1958 = 100)
Agriculture, forestry, and fishing	63	59*
Mining and quarrying	58	40
All manufacturing industries	103	194
Food, drink, and tobacco	100	132
Chemicals and allied industries	96	159
Metal manufacture	101	
Iron and steel		176
Non-ferrous metals		179
Engineering and electrical goods	118	
Electrical goods		335
Machinery		228
Instrument engineering		195
Shipbuilding and marine engineering	65	214
Vehicles	93	
Metal goods not specified elsewhere	112	253
Textiles	77	104
Clothing and footwear	86	252
Leather, leather goods and fur	88	199
Bricks, pottery, glass, cement, etc.	107	193
Timber, furniture, etc.	113	
Timber		192
Furniture		277
Paper, printing, and publishing	111	
Publishing and printing		156
Paper, pulp, etc.		151
Other manufacturing	125	245
Construction	106	387
Distributive trades	100	313
Gas, electricity, and water	109	135
Transport and communication	93	166
Finance, professional services	135	
Miscellaneous services	105	
Finance and insurance		226
Services		142 *
Public services	110	122 *

* Figures based on 1959 = 100

Source: Employment and Productivity Gazette and Yearbook of Labour Statistics

Note: The U.K. figures cover self-employed and unpaid family workers as well as employees, while the Japanese figures are only for employees except for agriculture and services.

The level of labour demand does not only differ between industries but also varies among different types of labour. Young workers are in excess demand, while job opportunities are scarce for older workers, in Britain and Japan. This is also reflected in the narrowing of wage differentials between juvenile and adult workers and the falling off of wages for older workers, as we have seen in Chapter 4. Young workers, especially new school-eavers and university graduates, usually have no power of directly regulating their pay and other conditions of work because they are not yet affiliated to any

Table 8 - 4

Great Britain: ratio of the wholly unemployed to unfilled vacancies, March, 1969		Japan: ratio of active job applicants to unfilled vacancies, October, 1967	
Boys under 18	0.34	Boys under 20	0.3
Men 18 and over	4.80	Men 20-50	0.5
		Men 51 and over	4.4
Girls under 18	0.15	Girls under 20	0.4
Women 18 and over	2.00	Women 20-50	1.2
		Women 51 and over	5.6

Source: Department of Employment and Productivity; Ministry of Labour.

trade union. Their wages are, therefore, thought to be directly subject to market forces. From this point of view we shall examine the relationship between their wages and demand pressures for them later.

Since the Second World War many Western countries have experienced full employment and labour shortages together with the progress of unionisation among the workers. Britain's unemployment

rate during the last two decades or so has been well below the 3 per cent mark which was regarded by Lord Beveridge as fulfilling the full employmenttarget (1), although the actual number of the unemployed increased from a quarter million to half a million during 1955-69. Japan's unemployment rate was also below 3 per cent during the last 16 years (and below 2 per cent, if 1955, 1956, and 1958 are excluded). This figure, if taken at face value, means super-full employment in Japan, but it concealed an enormous amount of disguised unemployment, without which it would hardly be possible to mobilise 3 - 4 million workers to expanding secotrs of the economy every year (2). Nevertheless it is quite certain that unemployment, either in absolute terms or as percentage of the labour force, declined in Japan during the 1960's, while in Britain unemployment tended to increase. Towards the close of the 1950's there was only one job vacancy for every school-leaver and for every four job applicants of other types but in 1969 five job vacancies for every school-leaver and ten job vacancies for every eight job applicants of other types in Japan (3). Thus labour shortages have become general and increasinglyacute in recent years there.

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(1) Lord Beveridge, Full Employment in a Free Society (1944), p. 1.
(2) School-leavers and university graduates accounted for only less than one third of the newly hired employees during 1966 and 1967 and the remainder were job-changers (Source: Ministry of Labour, Employment Trend Survey).
(3) Source: Ministry of Labour, Employment Security Statistics.

3. Labour Demand and Wages Movements

The quantitative analysis of the relationship between wages and probable explanatory variables has been developed rapidly since A.W. Phillips first showed, by way of what was later called the "Phillips curve", that in respect of statistical data on wages and unemployment covering 1861-1957 in Britain, there was a stable relationship between the rate of change of money wage rates (ΔW) and the level of unemployment (U), or the rate of change of unemployment (ΔU), 'except in or immediately after those years in which there was a very rapid rise in import prices'. (1) Thereafter R.G. Lipsey confirmed that a relationship between ΔW and U, existed, though that between ΔW and ΔU was negatived, but refuted that the relationship was stable over the whole period, as Phillips asserted. (2). Lipsey found that the observations in the 1950's 'definitely lie above the curve fitted to the nineteenth-century data' and suggested that for any given level of demand for labour, wages were now pushed up by increased union power faster than previously (which he called 'institutional shift'). (3) Other empirical studies also suggested that the level of labour demand was an important factor affecting wage movements in the post-war years (4).

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(1) A.W. Phillips, "The Relationship between Unemployment and The Rate of Change of Money Wage Rates in the United Kingdom, 1861-1957", Economica vol. 25 (1958), pp. 283-99.

(2) R.G. Lipsey, "Can There Be a Valid Theory of Wages?", Adv. Sci. Vol. 19 (1965), pp. 105-12.

(3) Ibid.

(4) For example, L.A. Dicks-Mireaux, "The Interrelationship between Cost and Price Changes, 1946-1959: a Study of Inflation in Post-war Britain", Oxford Economic Papers, vol. 13 (1961), pp. 267-92; and L.R. Klein and R.J. Ball, "Some Econometrics of the Determination of Absolute Prices and Wages", Economic Journal, vol. 69 (1959), pp. 465-82.

But this view has been challenged by Hines who argues that 'excess demand as measured by the level of unemployment does not appear to have made a significant contribution to the explanation of the variance in wage rates over the period 1921-61.' (1) There is yet no sign for the settlement of this controversy surrounding unemployment (or excess demand) and union power as determinants of money wages. For example, the National Institute Economic Review has proclaimed the opposing views that 'the level of unemployment is found to have a strong influence,' (2) and, in one of its later issues, that 'the orthodox 'Phillips' - type explanation simply does not apply.' (3). In Japan there have also been several attempts to apply a Phillips-Lipsey-type model to the Japanese labour market, which resulted in a good statistical fit (4).

We have also tested, by a simple correlation analysis, the relationships between ΔW and the level of labour demand (as measured in terms of U, ΔU, unfilled vacancies, or a combination of them) and between wage differentials and differences in the level of labour demand (5). Here are some results from it. Generally, the wage level or ΔW is found to be far more strongly associated with

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(1) A.G. Hines, op. cit.

(2) National Institute Economic Review, no. 46 (1968), pp. 52-67.

(3) Ibid., no. 55 (1971), pp. 38-51.

(4) T. Watabe, "Chingin Bukka no Kankei to sono Seisakuteki Imi", H. Kumagai and W. Watabe (eds.), Nihon-no Bukka (1966), pp. 55-67. He concluded that the rate of unemployment and the rate of wage increase were very strongly associated with each other over the years 1929-39 and 1955-64 but union density itself explained little about changes in W.

(5) Our analysis covers mainly the last decade or so (See Appendices X-XII, XIV, XVI and VIII.)

the level of labour demand in Japan than in Britain. First, the rate of wage increase is more related to the level of unemployment (correlation coefficient $r = -0.3973$ for the U.K. and $r = -0.7914$ for Japan) than the rate of unemployment ($r = -0.3973$ for the U.K. and $r = -0.6013$ for Japan). But the level of demand as measured in terms of unfilled vacancies better explains changes in the rate of wage increase in both countries ($r = 0.7163$ for the U.K. and $r = -0.9161$ for Japan). In Britain, as the ratio of unfilled vacancies to the labour force increased, the rate of wage increase rose as well in the 1960's. In Japan, ΔW moved inversely with changes in the ratio of job applicants to unfilled vacancies, in other words, the decline of this ratio (the rate of excess supply) concurred with increases in ΔW.

In Britain, the correlation between the industry wage level and the industry unemployment rate or unfilled vacancies as percentage of the labour force is not significant ($r = 0.2636$ and $r = -0.1803$) but that between the industry rate of wage increase and changes in the industry unemployment rate or ratio of unfilled vacancies to the labour force is a little better ($r = 0.3385$ and $r = -0.3683$ respectively). Although it may imply that wage increases in a given industry concurred with decreases in the industry's labour demand, it seems that the inter-industry wage differentials in Britain cannot be accounted for very much by differences between industries in labour-demand pressures: in other words, it is obvious that the industry wage increases were not due to its excess demand for labour.

As regards the relationship between the regional wage level

and the level of labour demand in the region, there is found only a very weak correlation between them in both Britain and Japan ($r = -0.2733$ for Britain and $r = -0.1236$ for Japan). If we fit a non-linear curve to them, like the Phillips curve (1), a better-fitted relation may be found, though with exceptions (Figure 8 - 2 and 8 - 3). But these exceptions are explicable: the South-Western and East Anglia regions are both main agricultural regions, within which there is no important industrial centre, but close to an important industrial area, namely the South East; Northern Kanto, Tokai, and Sani-in are also agricultural regions close to large industrial areas such as Tokyo, Nagoya, and Osaka; so that in these regions an absence of industry (and thus lack of labour demand) and potential (relative) underemployment in agriculture have contributed to a low regional wage level and ease of access to industrial centres has eliminated overt unemployment. Northern Kyushu, another exception in Japan, was once a very prosperous region with coal-mining and heavy industries so that its regional wage level had traditionally been high despite the decline of these industries which, in turn, increased unemployment in the region. In this connection, we have found that the regional level of the starting pay of new school-leavers is fairly strongly associated with the regional level of demand for them in Japan ($r = 0.6897$) and that interregional differences in their pay level are very small, despite large differences in the regional level of labour demand, except for

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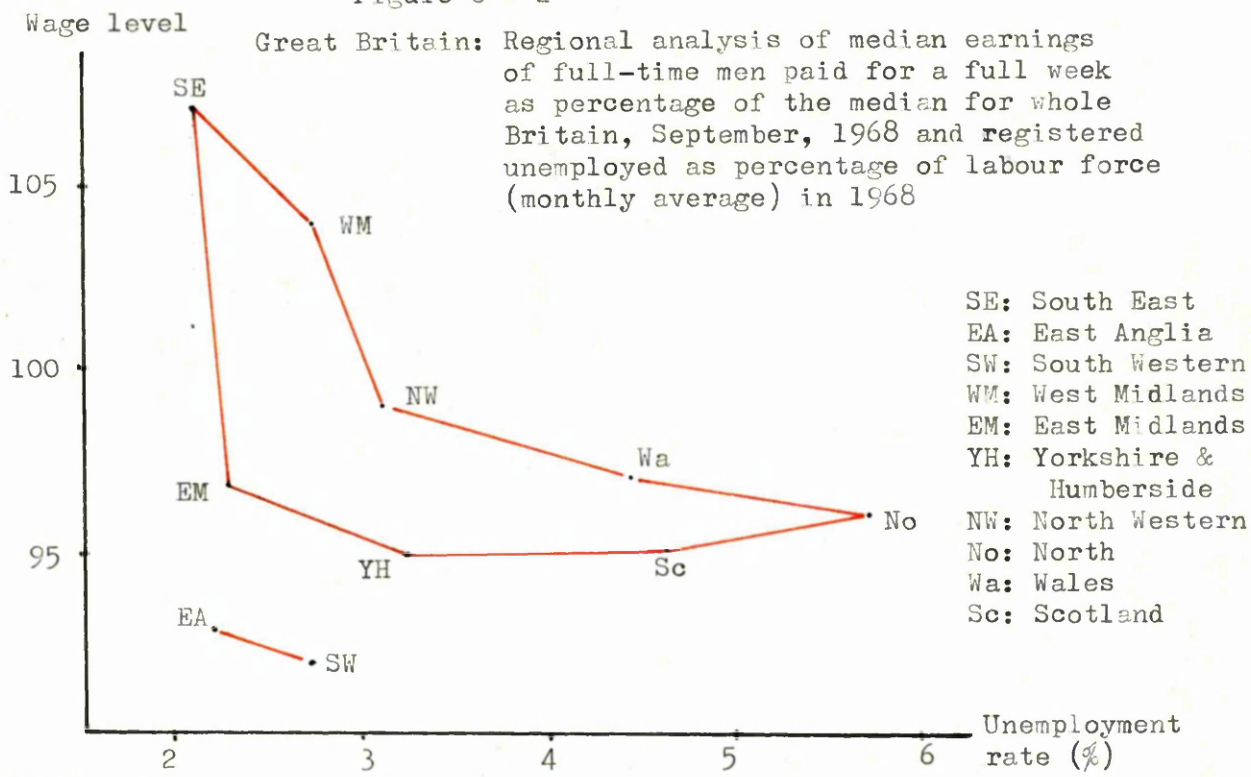
(1) See A.P. Thirlwall; "Regional Phillips Curve", in Oxford University Institute of Economics and Statistics, Bulletin (February, 1970).

Figure 8 - 2

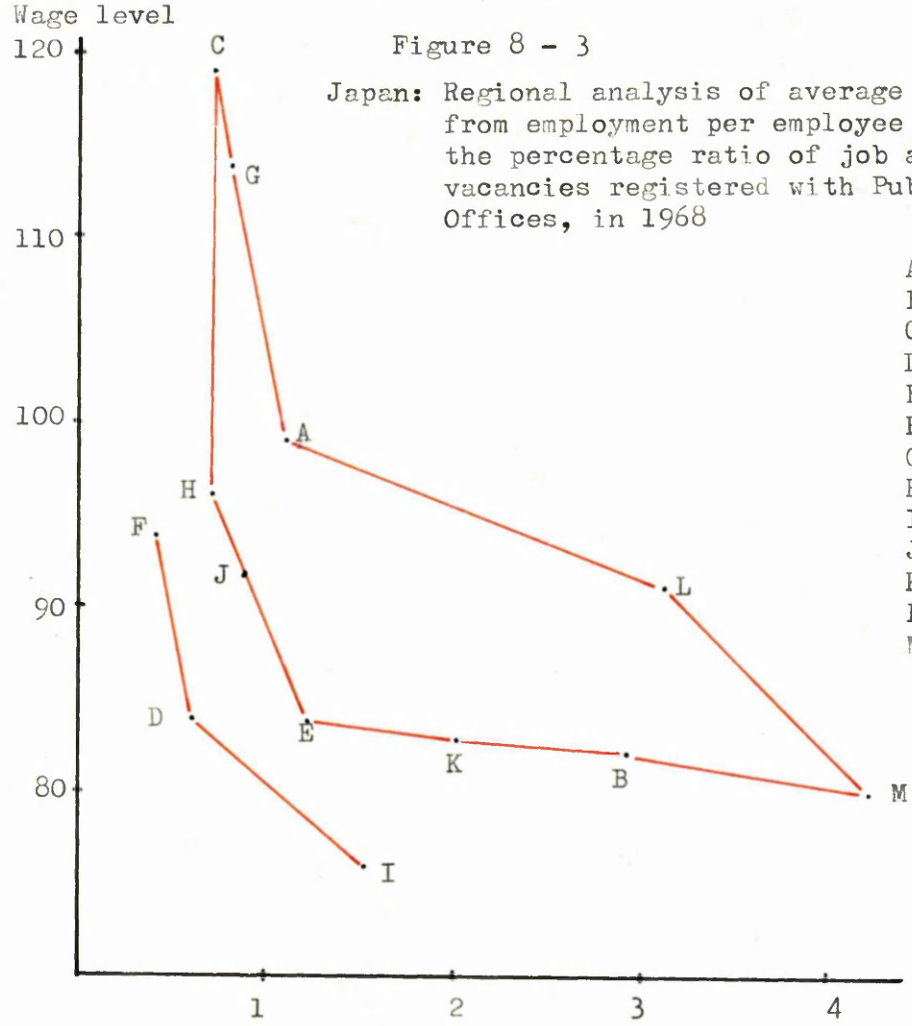
Great Britain: Regional analysis of median earnings of full-time men paid for a full week as percentage of the median for whole Britain, September, 1968 and registered unemployed as percentage of labour force (monthly average) in 1968



SE: South East
EA: East Anglia
SW: South Western
WM: West Midlands
EM: East Midlands
YH: Yorkshire & Humberside
NW: North Western
No: North
Wa: Wales
Sc: Scotland

Figure 8 - 3

Japan: Regional analysis of average annual income from employment per employee in 1968, and the percentage ratio of job applicants to vacancies registered with Public Employment Offices, in 1968

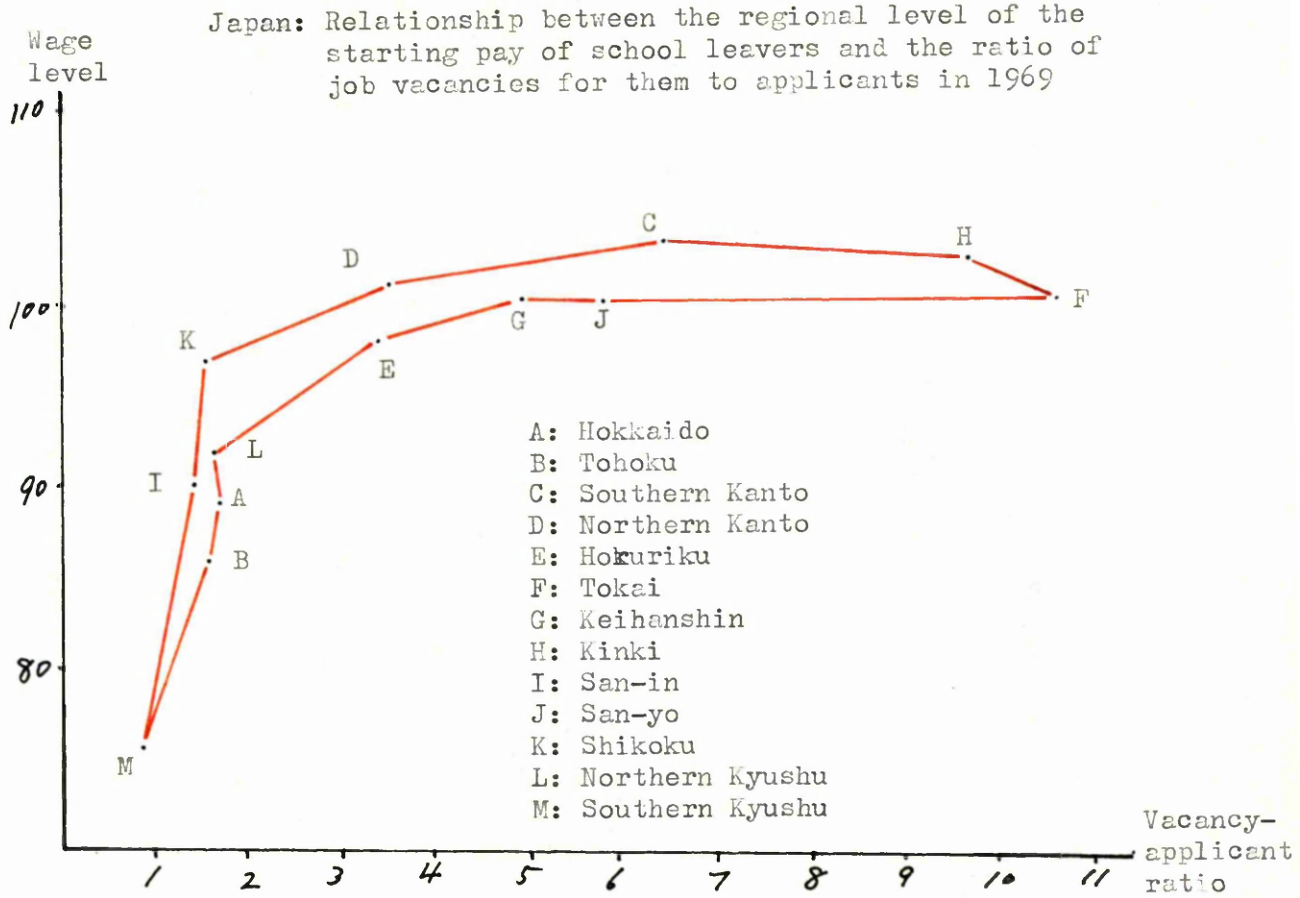


A: Hokkaido
B: Tohoku
C: Southern Kanto
D: Northern Kanto
E: Hokuriku
F: Tokai
G: Keihanshin
H: Kinki
I: San-in
J: San-yo
K: Shikoku
L: Northern Kyushu
M: Southern Kyushu

Source: Employment and Productivity Gazette; Employment Status Survey and Year book of Labour Statistics.

Figure 8 - 4

Japan: Relationship between the regional level of the starting pay of school leavers and the ratio of job vacancies for them to applicants in 1969



Source: Ministry of Labour, Shinki Gakusotsuha Shoninkyu Chosa.

those regions which are remotest from any industrial centre (like Hokkaido and Tohoku in the north and Kyushu in the south)or traditionally low-wage and industry-absent regions (like San-in) and have a low level of labour demand (See Figure 8 - 4).

CHAPTER 9

CONCLUSION

1. Findings

Prices

(1) The pace of price increase tended to accelerate gradually in the 1960's in Britain, while the rate of increase in consumer prices in Japan rose rapidly in the first half of the decade and remained at a high level thereafter.

(2) Consumer prices in Japan rose considerably faster in the first half of the 1960's and slightly faster than in Britain.

(3) By contrast, other price indexes - wholesale, import and export - remained fairly stable in Japan, as compared to Britain where these prices rose relatively fast particularly after devaluation in 1967.

(4) The movements in prices, especially import, wholesale and export prices, are more closely related to one another in Britain than in Japan where the association between wholesale and consumer prices is weak.

(5) The movements in import prices between the two countries are, as might be expected, highly correlated but not so for export prices.

(6) One of the main differences in the import price structure between both countries is that the prices of foodstuff which constitutes one third of Britain's total imports rose considerably.

(7) The prices of basic materials, fuel and capital goods in Britain rose, while those in Japan remained almost stable.

(8) The wholesale prices of iron and steel and products of engineering industries rose in Britain and remained fairly stable in Japan, while the prices of domestic farm products remained almost stable in Britain and rose very much in Japan.

(9) The prices of housing and services rose rapidly, which contributed to the increases in the consumer price level in general in both countries.

(10) One of the main differences in the consumer price structure is that the increases in the prices of food (which contributed most to the rise of the general price level) in Japan and in the prices of fuel and light in Britain were most remarkable.

Wages

(1) The pace of wage increase accelerated in the latter half of the 1960's, as compared with the preceding decade, particularly in Japan and it was generally faster there than in Britain.

(2) Although a high rate of wage increase tended to be accompanied by a high rate of price increase, the rate of increase in real wages was high when the increases in wages and prices were both slow, in both countries during the last two decades.

(3) Movements in wages were more closely related to consumer prices than wholesale prices, while the degree of association between those two variables is higher in Japan than in Britain.

(4) Wage dispersion, particularly downward spread, is generally much larger in Japan than in Britain.

(5) Apart from wider wage dispersion in Japan, the wage structures of both countries are alike in many ways: the ranking of occupations and industries (as far as manufacturing industries are concerned) is very similar; large firms tend to pay more than small firms; the wage level is industrial areas with a large agglomeration of population is higher than that in agricultural areas; as far as male employees are concerned, their salaries tend to rise with their age up to their thirties in Britain and to their forties in Japan; age differentials for female workers are narrower than those for males.

(6) In both countries there is a tendency for wage differentials to narrow in the long run, although they seem to have increased in the 1950's in Britain.

(7) In Japan, the wages of workers in low-wage occupations, industries, regions or small firms, or of female and young workers, rose faster than the average, which resulted in a general contraction of wage dispersion.

(8) The industry rate of wage increase was, though weakly, positively related to the industry wage level in Britain but negatively in Japan.

Productivity

(1) The industry wage level and rate of productivity growth are positively associated with each other in both countries but the association is much stronger in Japan than in Britain where it is not very significant.

(2) There is no correlation between the industry rates of wage increase and productivity growth in Britain but, though weak, some

negative correlation between them in Japan.

(3) Productivity growth is strongly associated with output expansion in both countries and price increases are negatively associated with productivity growth in Japan but not in Britain.

Trade Unions

(1) In Britain the rate of increase in the general level of money wages and union density (the percentage of employees in trade unions), or the rate of change in it, are positively associated, while in Japan the former is negatively related to union density and positively to the rate of change in union density.

(2) In Britain the industry wage level is positively, though very weakly, associated with the industry union density, while in Japan there is a fairly good negative correlation between the industry union density and the industry wage level or rate of wage increase.

(3) On the whole, trade-union density, or the rate of change in it, does not explain very much about movements in wages, as the correlations between these variables are not very strong. But we can say with some confidence that in Japan union density is irrelevant to movements in wages (because the correlation between them is negative at both aggregate and industry levels).

Labour Demand

(1) In both Britain and Japan the rate of wage increase is negatively related to either the level or rate of unemployment,

though the correlation coefficients for them are very weak (perhaps not very significant) for Britain, as compared with those for Japan which are quite high.

(2) In both countries the rate of unfilled vacancies is much more strongly associated with the rate of wage increase and the degree of association between them is very much higher for Japan.

(3) Differences between industries in the level of labour demand (as measured in terms of the rate of unemployment or unfilled vacancies) do not explain the industry wage level or rate of wage increase but a high industry wage level tends to be associated with a high industry rate of unemployment or a low industry rate of unfilled vacancies, in Britain.

(4) The linear relationship between the regional wage level and unemployment rate or level of excess supply (as measured in terms of the ratio of job applicants to vacancies) is weak for both countries but there seems to be a significant non-linear relationship between them, like a "Phillips curve".

(5) On the whole, the level of labour demand far better explains the movements in wages in Japan than in Britain.

Money supply, etc.

(1) The rate of increase in wages is negatively (but positively and more strongly if we allow for time lags) correlated to that in money supply in Britain but there is no such correlation in Japan.

(2) The movements in the wage level and money supply are closely associated with one another in both countries.

(3) The pattern of industrial concentration is similar between the two countries: The level of industrial concentration is high among the heavy and chemical industries and low among the light industries, services, distributive trades, construction, etc., with some exceptions.

(4) In oligopolistic industries, the degree of unionisation, the wage level and the rate of productivity growth are generally high.

2. Wage Differentials and Labour Market Structure

Wage differentials spring from various source. In classical economic theory, which assumes perfect competition in both factor and product markets and homogeneity of labour, the wage differentials are essentially ascribed to differences between occupations in non-pecuniary advantages or disadvantages incidental to the occupation and the cost of skill acquisition. This theory of occupational wage differentials explains nothing about other types of differentials which do exist, except that these differentials arise from differences in skill mix between firms, industries or regions. Even the existing occupational differentials seem to be much wider than the theory would justify. We have seen, in Chapter 4, that within a given occupation there is a wage dispersion which is often wider than that in the average wages between different occupations.

We have also showed that there are genuine interregional, interindustry, or inter-firm differentials: workers of a given occupation in a high-wage region, industry or firm earn more than their counterparts in a low-wage region, industry or firm. To explain this, we have advanced a hypothesis that the labour market is structured or fragmented in various ways because of limited labour mobility and availability of market information. Apart from the occupational markets for certain types of labour which may be organised on a nation-wide basis, there are separate local markets catering for local industries and only weakly linked with one another by limited interregional migration of labour, and within the local market firms have developed an internal labour market which continuously and exclusively ceters for their own needs and which is more or less linked with the external market (i.e. local market as a whole). Under these circumstances, some firms or industries which have advantages over others in profitability or labour productivity may, for various reasons (mentioned in Chapter 5), pay their employees higher wages than the average. Capital and labour (including managerial and scientific talents) are unevenly distributed among the regions. If new industries grow in some (usually urban) area, they draw labour and capital from within the area or other areas but capital moves more swiftly between regions than labour does because the capital market is more highly developed by nation-wide financial institutions than the labour market and the cost of migration is much lower for the former (except fixed capital) than the latter. As a result, capital concentrates faster than labour

in the prosperous area, while the local labour market there tightens, despite the presence of labour reserve elsewhere, so that wage differentials between the prosperous and other egions will widen.

Wider wage differentials in Japan than in Britain are essentially ascribed to larger differences in the level of labour demand and productivity (or profitability) between regions, industries or firms owing to the rapid and unbalanced growth of the national economy. But at the same time the immaturity of the labour market and relatively limited labour mobility have retarded the narrowing of wage differentials. If a collective bargaining system were established on a national or industry-wide basis, as in Britain, it would play a role in reducing wage differentials between regions, industries, or firms within the industry in Japan as well. In this case, however, fundamental disequilibria between them would not be eliminated but could, on the contrary, be aggravated: to put it in another way, for example, artificial wage levelling would increase unemployment in the low-wage, depressed areas, while labour shortages elsewhere remain unabated. In reality, fortunately (?) Japanese trade unions have not been in a position to play such a role so far, but the developing labour shortages have increased labour mobility, which has resulted in a general contraction of wage differentials. Yet there remain great imbalances in the allocation of manpower and capital between regions, industries or firms.

It seems that highly developed internal labour markets are more common in Japan than in Britain. They have advantages and

disadvantages. One of the main advantages is that the employer is more willing to make investments in his employees in the form of internal training or otherwise. This is beneficial for not only the employer but also individual employees involved and the nation as a whole, for, from the employee's point of view, it will lead to his career development and from the standpoint of the national economy, it will lead to an increase in the supply of skilled labour and thus the improvement of the quality of the nation's manpower. Another advantage is that a stable and continuous employment coupled with promotion prospects within the firm is certainly conducive to the stability of management-labour relations there. A third is that such a labour market structure has contributed to the development of multiple, small labour organisations and a decentralised collective bargaining system and thus prevented trade unions from monopolising the labour market. We therefore consider that the Japanese labour market is generally more competitive than the British counterpart which is characterised by industry-wide labour organisations and a relatively centralised collective bargaining system. On the other hand, their most important disadvantage is that they impede labour mobility between firms or industries and thus an optimum allocation of manpower at macroeconomic level. While there was a large labour reserve, this was not a serious problem. Now that full employment (in the sense that all workers are in employment) has been realised, however, the next step is to eliminate pockets of relative underemployment (i.e. substandard-wage workers) in the low-productivity sectors by shifting such workers to a more productive

sector. But the fragmentation of the labour market at company level has made it difficult in Japan.

In any internal wage structure, if a particular pattern of wage relativities among the employees is strictly maintained by management or trade unions, irrespective of supply and demand conditions for each type of labour in the external market, wage drift may result from increases in the wages of particular groups of employees which are originally induced by changes in demand for them in the external market or otherwise. The system of age differentials in Japan and the systems of wage relativities between skilled and unskilled workers or between piece - and time - workers in Britain have often been important sources of wage drift.

3. Demand Pull or Cost Push?

The causes of price increases may be reduced to excess demand or cost push. As mentioned in Chapter 1, however, demand pull and cost push go hand in hand in the full-employment economy once inflation gets under way. It is obvious that in Japan the pace at which consumer prices rose increased with accelerated economic growth in the 1960's, but in Britain increases in consumer prices concurred with slow economic growth. This is one of the reasons why we suspect that price inflation in Japan has essentially been due to demand pull, while that in Britain may have been caused by cost push. Of course, economic growth brings about increases in production capacity and thus contributes to the elimination of excess demand.

Even if excess demand is eliminated by increases in supply, however, certain increases in the price level may be inevitable with economic growth, because of the limited availability of resources and frictions incidental to factor mobility. That is to say, the transfer of labour (interregional migration and training) and capital (accelerated depreciation of fixed capital) entails cost; and economic resources like manpower, land, minerals, water, etc. are limited and have to be exploited in a more expensive way as what is easily available is exhausted, so that the marginal supply cost of national output may increase with its expansion, though technical progress may prevent the marginal supply cost from rising by making possible a more effective utilisation of these scarce resources.

We just suggested that price inflation in Britain might have taken place without a large excess of demand. This may be incorrect, however, for excess demand may have existed there; only it may not have been realised in output expansion for lack of investment and production capacity. None the less there are some evidence that excess demand, if any, might not be general (for example, unemployment level has tended to drift upwards, particularly in recent years) in Britain, while demand generally increased in Japan because all industries expanded their employment there. Excess demand may arise from investment, consumer expenditure, exports or government expenditure. During the last decade, the increase in expenditure on domestic capital formation was most impressive and its share in total national expenditure rapidly expanded in Japan, while it was less remarkable in Britain.

Table 9 - 1

Composition of Increases in National Expenditure Attributable to Various Sources, 1959 - 69:

	U.K.	Japan
Total expenditure	100	100
Consumer expenditure	43	43
Government expenditure	16	7
Gross domestic capital formation	25	40
Exports	16	10

Source: National Institute Economic Review and the Economic Planning Agency.

The increase in consumer expenditure can mainly be ascribed to rises in income from employment. The sources of investment funds are undistributed profits, issue of securities, bank advances, or government loans. The issue of securities and undistributed profits are main sources of investment funds for British firms, whereas Japanese enterprises heavily depend on bank advances. Japanese firms have been short of investment funds and banks, willing to make loans to them. Since Japanese banks also lacked money despite the high propensity of Japanese households to save, the central bank allowed them to overdraw. Thus the monetary authorities deliberately supplied money in quantities so as to encourage banks to lend investment funds to private enterprises. As shown in Chapter 1, even if we allow for rapid economic growth in Japan, money supply rose still considerably faster there than in Britain. It is, therefore, likely that excessive money supply contributed to the rise in the price level through the creation of excess demand, though the increase in money

supply were not directly related to rises in the price level in Japan. This is probably because the increases in money supply were used to cater for investment, rather than for consumption, which created excess demand in the short run (say, in the first half of the 1960's) but increased production capacity later (in the second half of the decade). Bank advances in Japan were concentrated in large manufacturing firms, which brought about large improvements in productivity and relative price stability there, as contrasted with rising prices of manufactured goods in Britain, while small firms and agriculture which produced mainly consumer goods lagged behind in productivity growth and met mounting demand with price increases. These price increases cannot be accounted for by the assumption of oligopolistic market structure because these sectors are intrinsically competitive, though some of them are protected by government-initiated cartels, in Japan. Wage costs in these traditional sectors also rose faster than those in the modern sector but this is due to labour shortages because workers employed in the former are not at all or only poorly organised. Thus, the competitively determined prices rose fastest in Japan, while the prices of oligopolistic and high-productivity manufacturing sector rose as fast as those determined more competitively, in Britain.

In both Britain and Japan increases in consumer expenditure lagged behind those in other items (save government expenditure in Japan) in percentage terms and personal savings ratios rose during the last decade, so that we cannot ascribe general excess demand,

if any, particularly to the increases in consumer expenditure. An excess of wage increases over productivity improvements causes a rise in the cost of production. But these wage increases are not necessarily due to excessive wage claims by trade unions but maybe to labour shortages. In Japan, wages rose faster in competitive, low-wage industries than in oligopolistic, high-wage industries in recent years. Since those low-wage industries are not well organised, trade unions are not to blame for it. It seems, therefore, more reasonable to consider that labour shortages have pulled up low wages. In Britain wage advances in oligopolistic manufacturing industries were as large as or sometimes larger than those in other industries and services. In Japan increases in consumer prices mainly arose from excess demand for the products of low-productivity sectors like agriculture and small firms in manufacturing and services, and the consequent rapid increases in the low wages of employees and the low incomes of self-employed persons working in these sectors and distributive trades (the latter increases were, of course, supported by excess demand for the products). Here one might ask why the prices of goods manufactured by the modern sector remained stable, instead of falling so as to offset the rises in the prices of those traditional sectors. This may be better explained by the existence of the world market, which we shall discuss later.

Trade union influence on wages seems to be much weaker in Japan than in Britain. We have also showed that the wage patterns set by large firms in leading industries did not have any great spill-

over effect on the wages of small firms in Japan. Lastly, wage movements in Japan are most closely associated with changes in the level of labour demand, while the correlation between them in Britain was relatively very weakly. On the whole, we may conclude that inflation in Japan has so far been more of a demand-pull type, while in Britain cost push elements have been more important.

4. Policy Implications

Inflation is a problem which almost all countries have suffered to a greater or lesser degree. This partly reflects the interdependence of national economies through international trade. The higher the proportion of overseas trade in a country's national product, the more it will be affected by "inflation disease" prevailing in the world market. Rises in import prices push up the cost of domestic products and thus domestic prices and, perhaps, eventually export prices. In this connection, devaluation may redress deficits in the balance of payment in the short run but at the same time have an adverse effect on domestic and export prices through rises in import prices and induced wage increases in a longer run. This has been shown by the British case in recent years. Today nearly four fifths of the world's exports of manufactures are supplied by six major industrial countries, namely West Germany, the United States, Japan, the United Kingdom, France and Italy. We may well assume that each of them has a supply curve sloping upwards to the right (i.e. the price elasticity of supply is between zero and infinity) in the short run because of high employment prevailing in these countries

or other limitations. There is reason to think that the supply curve of the rest of the world also slopes upwards to the right in the short run. If one of the six industrial countries puts up its export prices due to cost inflation at home (e.g as in the United States in the latter half of the 1960's), it will lose part of its share in the world market and other countries will gain but at the same time the export prices of the gaining countries also tend to rise. If they do not raise their export prices, surpluses in their balance of payments mount up and it must end up with the revaluation of their currency; the result will be a rise in their export prices anyway. From the standpoint of importing countries, a rise in the export prices of manufactured goods is a rise in their import prices, which may trigger off domestic inflation in these countries or make their terms of trade unfavourable. This produces further repercussions among them. For example, faced with rising import prices of manufactures, Arab oil-producing countries recently took a concerted action against industrial countries in putting up their export prices of oil. International oil companies have passed this price increase on to consumers in industrial countries. Under these circumstances it is almost impossible for any free-trade country to stay immune from world-wide inflation measles and eradicate domestic inflation by its own efforts alone, though it can reduce its rate of inflation at home by absorbing increases in import prices through productivity improvements. Thus domestic anti-inflationary policies like monetary, fiscal or incomes policies are inevitably vulnerable to inflationary trends in the world market. We

are, therefore, obliged to consider curbing domestic inflation within these limits, unless there is a world-wide concerted attack against inflation (which is difficult to achieve because of great differences in national interests among the countries).

In this context Japanese industry has so far benefited from world-wide inflation, for it has been able to expand its exports without serious price competition abroad and import basic materials at relatively stable prices. But this, in turn, implies that it has had no incentive to cut the prices of its manufactured goods at home, despite rapid productivity growth and output expansion in industry.

Bearing the above arguments in mind, we shall discuss domestic anti-inflationary policies. First, an incomes plicy is not effective except in those countries where there are strong national centres of trades unions and employers' associations which have control over their members and a centralised system of collective bargaining. This is confirmed by the experiences of Britain where these conditions have not been met and by those of Netherlands and Sweden which, with well-organised national federations of trade unions and employers' associations and a centralised collective bargaining system, have achieved some success in the implementation of incomes policies (1). In order for an incomes policy mainly directed towards the regulation of wages and salaries, like that in Western countries, to be effective in controlling cost push,

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(1) See H.A. Turner and D.A.S. Jackon, "On the Stability of Wage Differences and Productivity-based Wage Policies: an International Analysis", British Journal of Industrial Relations, vol. vii, no. 1 (1969), pp. 1 - 17.

two conditions are necessary: (i) wages and salaries must constitute by far the greatest part of national income (Otherwise increases in other incomes, which may also be important sources of cost push, remain out of control); (ii) the collective bargaining system must be centralised and the collective agreements struck under this system, must regulate all important components of the actual earnings of employees (Otherwise wage drift might undermine the regulatory effects of collective agreements). When we look at the structures of trade unions and employers' associations and the collective bargaining system in Japan, we cannot help but feel doubt about the likely effectiveness of an incomes policy. A voluntary incomes policy could have much less chances of success because of the wide differences of opinion which exist between trade unions, employers and the government. To points to add are that labour's share of national income in Japan is still small, though increasing, as compared with Western countries (1) and that a considerable part of actual earnings or labour costs is outside the regulation of collective agreements in Japan. In order for an incomes policy to be effectively implemented there (which the present circumstances do not seem to require or justify), it will be essential to strengthen or create those national centres of trade unions and employers' associations which will have strong control over a substantial part of incomes from employment, and to establish a centralised

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(1) Labour's share of national income (Income from employment as percentage of national income) was 70.6 per cent in 1969 in the U.K. and 55.0 per cent in 1967 in Japan (Source: Annual Abstract of Statistics and the Economic Planning Agency publication).

collective bargaining system and promote mutual understanding between trade unions, employers and the government.

Secondly, the effectiveness of demand-control policies as designed to counter inflation may only be temporary. The squeeze of government investment expenditure and money supply in general will curtail investment and retard capital formation which is essential to an increase in production capacity and productivity, so that it will weaken the ability of a country to cope with wage advances at home or inflation imported from abroad. This is proved by the British experience in the past. In this context, to put a curb on consumer expenditure by increased taxes may be the best way to control demand in a longer run, though it is politically most unpopular. Thirdly, in the case of Japan, as the expansion of demand and output and the changes in the industrial structure have been rapid and great, sectoral excess demands have frequently arisen and frictions incidental to factor mobility have been large. We need more drastic policy measures for the facilitation of factor mobility than in a slow-growing economy if price stability is to be achieved concurrently with rapid economic growth. The relative under-development of the labour market in Japan is partly reflected in wide wage differentials there. Labour is slow to move in response to excess demand and high wages. In this connection, the contraction of wage differentials should be realised through labour mobility rather than the raising of minimum wages or trades unions' initiatives because the latter may prevent the optimum allocation of labour among regions, industries or firms: in other words, if the

wage level of the low-wage regions or industries is artificially raised, unemployment may only increase there, despite labour shortages elsewhere, and fundamental disequilibria will not be eliminated.

Appendix I

Industrial Concentration Ratios in Britain and Japan:
The share of the three largest firms in the total output of the industry, in 1958

United Kingdom: Industry group	per cent	Japan: Industry group	per cent
Coal	100	Coal	27.0
(Food manufacturing)			
Milk products	28	Milk powder	75.8
		Butter	84.4
		Fresh milk	33.6
Bacon, meat & fish products	21	Ham and sausage	26.1*
Grain milling	35	Flour	53.9
Bread & flour confectionery	22		
Sugar	79	Sugar	31.4
Biscuits	39	Biscuits and crackers	27.7
Cocoa, chocolate & sugar confectionery	42	Cocoa and chocolate	29.1*
Brewing and malting	15	Beer	98.1
Spirit distilling and compounding	50-60	Seishu (sake)	3.0
		Shochu	36.7
		Whisky	92.7*
		Yeast	54.8
Vegetable/animal oils & fats	55	Soya-bean oil	26.3
		Shortenings	49.3
Margarine	71	Margarine	53.3
Soft drinks, ciders, etc.	33	Mayonnaise	92.9*
Starch & miscellaneous goods	22	Soya sauce	20.4
Fruits & vegetable products	34	Monosodium glutamate	89.3
Tobacco	81	Tobacco	100
(Textiles and clothing)			
Cotton/rayon spinning & doubling	22	Raw silk	27.9
Cotton/rayon weaving	11	Cotton yarn	17.5
Woollen and worsted	8	Rayon staple yarn	13.2
		Woollen yarn	24.7
		Woollen fabrics	9.9*
Jute	42	Hemp yarn	64.4
Narrow fabrics	15	Cotton fabrics	7.7
Miscellaneous textiles	15	Silk & man-made fibre fabrics	4.1*
Textile furnishing	20		
Men and boys' outwear	22		
Women's/girls' outwear	10		
Household textiles	7		
Dress/lingerie, etc.	3		
Overalls, shirts, etc.	8		
Weatherproof	10		
Hosiery & knitted goods	9		
Lace	11		
Corsets & miscellaneous dress	12		
Rope, net and twine	33		

Carpets	29		
Bedding, etc.	22		
Canvass goods, sacks, etc.	15		
Hats, caps & millinery	13		
(Chemicals and allied products)			
Fertilisers & pesticides	54	Ammonium sulfate	37.7
		Urea	59.0
		Lime nitroegen	74.5
		Calcium superphosphate	43.9
		BHC powder	60.7
General chemicals	33	Caustic soda	32.5
		Calcium carbide	42.3*
		Sulphuric acid	24.6
		Phenol (synthetic)	92.1*
Dyestuffs	74	Synthetic dyestuffs	58.3
Synthetic plastics & resins	54	Phenolics	43.9*
Coal-tar products	41	Polyurethanes	40.1*
		Phthalic alkyd	48.2*
		Poly-vinyl chloride	38.1
		Unsaturated polyesters	72.3*
		Cellulose base	71.0
		Ethylene	80.3*
		Polyethylene	80.6*
		Styrene polymers	100 *
Soap, detergents, etc.	69	Sythetic detergents	59.3**
Pharmaceutical preparations	23	Pharmaceutical preparations	26.8**
Toilet preparations	25		
Polishes	50		
Man-made fibres	89	Rayon filament yarn	62.8
		Rayon staple	30.9
		Synthetic fibres	76.4
Paint & printers' ink	23	Paint	27.3*
		Printer's ink	48.3
Explosives & fireworks	75	Industrial explosives	79.5
		Photographic film	100
Mineral-oil refining	88	Petroleum products	37.3
Lubricting oils & grease	43		
Rubber	32	Synthetic rubber	100
Glass	50	Glass	100
Cement	70	Cement	48.6
Bricks & refractory goods	22	Refractory bricks	23.9
Asbestoes	62		
Abrasives	61		
Chalk, clay, sand & gravel	18		
Pottery	15		
(Metal manufacture)			
Iron and steel (general)	30	Pig iron	71.8
Iron castings	18	Iron tubes	92.3
		Steel tubes	59.1
		Steel ingots	52.4
		Hot rolled products	52.0
		Cold rolled products	58.4*
		Light rolled products	61.9*
		Tinplate	83.5*
Wire & wire manufactures	23	Wire	21.9*
Miscellaneous metal goods	7	Copper products	11.3

Non-ferrous metals	21	Electric copper	65.8
		Electric zinc	77.7
		Aluminium	100
		Fabricated aluminium	43.7
Insulated wire & cable	57	Insulated wire & cable	39.1
Cans and metal boxes	45- 60	Cans	79.9*
Industrial plant & steelwork	16	Steelwork	14.6*
Engineers' small tools, etc.	12	Bridge-girders	45.6*
Tools and implements	19	Welding sticks	77.9*
Bolts, nuts, rivets, etc.	29		
Cutlery	49		
(Engineering industries)			
Industrial engines	42	Turbines	78.2*
		Engines for land transport machinery	51.0
Agricultural machinery (except tractors)	46	Power cultivators	55.3*
		Tractors	93.5*
		Excavators	85.6
Machine tools	18	Lathes	40.5
		Fraises	67.6
Mechanical handling	22	Metal press	38.4*
General mechanical engineering	10	Textile machinery	43.4
		Pumps	41.0*
Miscellaneous machinery	8	Sewing machines	27.3
Textile machinery	38	Gantry cranes	37.7*
Office machinery	40	Copying machines	93.3*
Ordnance & small arms	60	Ball bearings	70.1
Electrical machinery	43	Electric generators	69.5
		Electric motors	53.7
Miscellaneous electric goods	30	Transformers(standard)	54.4
		Transformers(non-standard)	66.3
Electric appliances (domestic)	45	Electric refrigerators	71.4
		Fluorescent lamps	81.1
Telephone & telegraph apparatus	58	Automatic transmitters	79.8*
		Radars	62.0*
Radio & electric apparatus	19	Television sets	52.4
		Transistorised radio sets	73.8*
		Battery	69.6*
Motor vehicles	47	Ordinary goods vehicles	74.8*
Motor cycles & cycles	57	Light goods vehicles	92.8*
Locomotives & track equipment	60 - 82	Ordinary passenger cars	83.9*
		Light passenger cars	100 *
Railway carriages & wagons	62	Motor cycles	55.7*
Shipbuilding & marine engineering	30	Electric locomotives	71.6
		Railway wagons	57.2
Aircraft production & repair	42	Steel ships	31.8
Watches and clocks	65	Watches	100
Scientific instruments	24	Photographic cameras	37.3
		Pianos	81.5*
		Matches	19.8
(Other manufacturing)			
Paper and board	32	Paper	36.0
Paper and board products	21	Newsprint	58.4*

Stationers' goods	27	Board	19.3*
Cardboard boxes, cartons	25	Cardboard	29.9*
Timber	4	Plywood	9.6*
Wooden containers & baskets	7	Soluble woodpulp	71.0*
Miscellaneous wood/cork products	6	Woodpulp for papermaking	31.2*
Furniture & upholstery	8	School textbooks	38.5*
General printing & publishing	8		
Newspaper & periodicals	26		
Fur	10		
Leather tanning & dressing	10	Building construction	13.6*
Leather goods	9	Civil engineering	6.5
Lineoleum & leathercloth	53	Department stores	27.2*
Footwear	10	Banking business	21.8
Fabricated plastics	10	Securities handling	47.4*
Gelatine, adhesives, etc.	42	Life insurance	42.9
Miscellaneous manufactures	38	Accident insurance	34.8
Handtruck, perambulators, etc.	32	Shipping	28.1*
Toys and sports goods	31	Warehousing	20.5
Jewellery, precious metals	22	Commercial TV broadcasting	35.6*
Gloves	19	Electricity	51.1
Shop and office fitting	13		
Brushes and brooms	21		
Quarrying & contractors' plant	27		
Miscellaneous building materials	19		
Construction	4		

Note:- The figures with one asterisk are for 1960 and those with two asterisks, for 1963.

Source: For the U.K. figures, A. Hunter, Monopoly and Competition (1966), pp.103-7; and for the Japanese figures, Fair Trade Commission, Nihon no Sangyoshuchu, 1963-1966 (1969), pp. 161-87.

Appendix II

Index Numbers of Industrial Production in 1967, taking 1960 (1963 for Japan) as a base year

United Kingdom: 1960 = 100		Japan: 1963 = 100	
Total	118	Total	161
Mining	91	Mining	104
Total, all manufacturing	119	All manufacturing	164
Food	113	Food	134
Coke, ovens, oil refineries	125	Petroleum & coal products	188
General chemicals	142	Chemicals	164
Engineering & allied, total	118	Machinery	187
Engineering & electrical goods	134		
Shipbuilding & marine engineering	87		
Vehicles (inc. aircraft)	103		
Metal goods n.e.s.	98		
Metal manufacture			
Ferrous	97	Iron and steel	192
Non-ferrous	98	Non-ferrous metals	165
Textiles	104	Textiles	143
Leather, fur, etc.	87	Leather & leather goods	113
Clothing and footwear	102		
Bricks, pottery, glass, etc.	133	Ceramics	151
Timber, furniture, etc.	145	Timber	123
Paper, printing & publishing	118	Paper and wood-pulp	145
Other manufacturing	103	Other manufacturing	161

Source: Monthly Digest of Statistics and Statistical Abstract of Japan.

Appendix III

Changes in Structure of Relative Prices

1. Consumer Prices

Changes in the overall price level have been accompanied by changes in the structure of relative prices and in the latter again there are some remarkable contrasts between Britain and Japan. As already mentioned in Chapter 3, consumer prices have been rising at a higher rate in Japan than in Britain since the beginning of the 1960's. Among other things, food prices showed the highest rate of increase and contributed to a large part of the rises in the consumer price level in Japan, while the British rate of increase in food prices was much more moderate (See Table III - 1 in the following page). The item which displayed by far the largest price increase among the British consumer prices is housing, followed by fuel and light, services, and miscellaneous goods. But this statement may be misleading because the prices of some sub-items within a particular item, like 'books, newspapers and periodicals' among the miscellaneous goods, increased much faster than those of other sub-items in the same commodity group, as showed in Table III-2. The items "housing" and "miscellaneous goods and services" registered the second highest rate of price increase in Japan, though the actual magnitude of the rise in the prices of housing in Japan seems to have been undervalued by British standards because it includes durable household goods which is a separate item in the British classification and whose prices have been among the stablest in Japan as well as in Britain. The land prices in Japan have been soaring to such an extent that their level in the urban area in 1969 was almost twelve times as high as that in 1955 (1), which was, together with rising cost of building (2), inevitably reflected in high prices of housing. The rapid

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(1) H.Fujino, "Chika-josho to Zaiseiseisaku", Ekonomisto (March 20, 1970), p. 144.

(2) H. Kato, "Kimete-kaku Bukka-ronso" Ekonomisto (op. cit.), p.60. Average annual rates of increase in land prices and building cost of wooden houses:

		1955-60	1960-65	1965-68	1968-9
Land prices in urban area	%	25.5	19.0	10.8	19.2
Building cost	%	4.7	9.6	8.9	14.0

Table III - 1

Percentage Increases in Consumer Prices over 1958-68
by Broad Group of Consumer Goods

United Kingdom: Retail Prices

	%	Weights
All items	35	1000
Food	27	263
Alcoholic drink	30	63
Tobacco	44	66
Housing	63	121
Fuel and light	54	62
Durable household goods	15	59
Clothing & footwear	18	89
Transport & vehicles	34	120
Miscellaneous goods	41	60
Services	51	56

Japan: Consumer prices in cities with 50,000 inhabitants or more

	%	Weights
Total average	63	1000
Food	72	425
Housing *	62	107
Fuel and light	15	50
Clothing	38	128
Miscellaneous goods and services	62	291

* Housing includes durable household goods.

Table III - 2

United Kingdom: Percentage increases in retail prices over 1962-68

All items	25
Food	24
Bread, flour, etc.	30
Meat and bacon	31
Milk, cheese and eggs	14
Vegetables	36
Housing	41
Rent	45
Rates and water charges	46
Fuel and light	31
Coal and coke	26
Gas	20
Electricity	45
Durable household goods	13
Transport and vehicles	20
Motoring and cycling	13
Fares	
Miscellaneous goods	25
Books, newspapers and periodicals	58
Services	31
Postage and telephone	23
Entertainment	26
Other services	38

Japan: Percentage increases in consumer prices over 1965-67

Total average	11
Goods	9
Farming & aquatic products	15
Rice, wheat, etc.	15
Fresh vegetables and fruit and raw fish	14
Manufactured goods	7
Foodstuff processed or canned	7
Big-firm products	4
Small-firm products	8
Textiles	7
Durable household goods	2
Other manufactures	8
Services	14
Rent on private housing	21
Fares, water charges, etc.	9
Personal services	17

Source: Employment and Productivity Gazette; Statistics Bureau, the Prime Minister's Office.

and continuous rise in the prices of housing and services, which seems to be a common phenomenon in industrial countries, is expected to proceed with the further concentration of population into big cities and their surrounding area and the rise of per-capita income level which bring about more demand for better standards of housing and services.

The prices of clothing rose much faster in Japan than in Britain, though the prices of textile goods had fallen since 1955 and those of Britain had risen slowly, as we shall see later. The reason is probably that the Japanese clothing industry consisting mainly of small, inefficient firms has not been able to cover increasing wage costs with productivity improvements, while a large part of textile goods are imported from abroad or produced by large-scale efficient firms. Many small firms producing other consumer goods have been faced with the same sort of problem. In the Japanese food-processing industry, for example, the differences between small-firm and large-firm products in the rate of price increase have been remarkable (See Table III-2). This phenomenon did not prevail before 1958 (1). The increases in the prices of alcoholic drink, tobacco, fuel and light were much faster in Britain than in Japan where these prices fell during 1951-64. Among other things, the rise in the price of electricity in Britain in the 1960's was remarkable.

2. Wholesale Prices

The British wholesale price level of manufactured goods rose by 40 per cent, as compared with 5 per cent for the Japanese counterpart, over 1955-69, as shown in Table III - 3, and Table III - 4. In Britain, above all, the largest price increases took place in the steel and engineering industries where modern technology is most applicable and large productivity improvements are feasible, though the engineering industries suffered from large increases in the prices of basic materials and fuel. In Japan, the prices of products of the leading "growth" sectors, such as chemicals, petroleum and allied products, machinery, etc. were almost constant or even on the decrease during the period under consideration. The prices of food, timber, paper, clothing, ceramics, etc. increased, gradually accelerating their pace of increase.

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(1) S. Yasui, "Waga-kuni no Bukka Shisu", in H. Kumagai and T. Watabe (eds.), op. cit., p. 149.

Table III - 3

Percentage Changes in Wholesale Prices over 1955-69 by Selected Sectors of Industry, in the United Kingdom:

All manufactured products (home market sales)	40
Food manufacturing industries	33
Chemical and allied industries	12
Steel industries	43
Engineering and allied industries	46*
Textile other than clothing industry	19
Clothing and footwear industries	24
Timber industry	38*
Paper industry	26

* Figures for the period between 1954 and 1969.

Source: Annual Abstract of Statistics.

Table III - 4

Percentage Changes in Wholesale Prices over 1955-69 by Selected Groups of Commodities, in Japan:

All manufactured products	5
Food	32
Chemicals	- 21
Iron and steel	0.5
Non-ferrous metals	34
Metal goods not elsewhere specified	31
Machinery	2.5
Textiles	- 5
Timber and wooden products	138
Paper, pulp and allied products	5
Ceramics	27
Oil, coal and allied products	- 8
Miscellaneous goods	24
Non-manufactures	43

Source: Bank of Japan.

The prices of basic materials and fuel used in industry also increased much faster in Britain than in Japan in the 1960's. The rise in the prices of fuel was particularly large in the former country. The prices of construction materials and capital goods also rose steadily at a good pace there. On the other hand, in Japan, the prices of basic materials and capital goods and fuel and power remained almost stable, except that the prices of building materials rose rapidly in the latter half of the 1960's. This is in sharp contrast to a steady rise in the British prices of producer's goods during the period.

Table III - 5

Percentage Changes in the Wholesale Prices of Producer's and Capital Goods over 1960-69

	U. K.	Japan
Basic materials	23	5
Fuel and power	29	- 0.5
Construction materials	26	25
Capital goods	29	1

Note:- 1. The U.K. figures are for basic materials and fuel purchased by manufacturing industry only.
2. Capital goods consist of plant, vehicles, building, and other fixed assets.
Source: Annual Abstract of Statistics and Bank of Japan.

3. Import and Export Prices

The import price level rose much faster in Britain than in Japan in the 1960's, partly because of devaluation of the pound sterling in 1967 in Britain. One of the most important differences in the import price structure between the two countries is that the British import prices of food, beverage and tobacco, whose weights were more than 30 per cent of the whole, rose in a considerable measure, while their Japanese counterparts remained almost stable. In both countries,

Table III - 6

Percentage Increases in Import Prices over 1959 - 69

United Kingdom:		Weights (1969)	Japan:		Weights (1969)
Total	24	1000	Total	8	1000
Food, beverage & tobacco	18	327	Foodstuff	1	185
Basic materials	15	222	Metals, ores, etc.	22	180
Fuel	-10	106	Mineral fuel	-27	205
Manufactured goods	45	337	Textiles	3	114
			Machinery	64	91
			Chemicals	-26	51
			Miscellaneous goods	22	174

Source: Board of Trade and Bank of Japan.

the import prices of manufactured goods, especially machinery, registered the largest percentage increase, and those of fuel decreased during the period as a whole, though they turned upwards in the second half of the

1960's in Britain.

In contrast with a slightly downward tendency in the Japanese export price level, all British export prices of main items increased more or less, in the 1960's. The export prices of chemicals, machinery, and metals, which constituted more than 60 per cent of her exports, decreased in Japan, while the export prices of these goods, which also constituted more than 60 per cent of Britain's exports, increased considerably there. The export prices of such goods as foodstuff, china, and other miscellaneous goods rose fairly rapidly in Japan as well but their share in her exports was less than 20 per cent in 1969.

Table III - 7

Percentage Changes in Export Prices over 1959-69

United Kingdom:		Weights (1969)	Japan:		Weights (1969)
Total	30	1000	Total	- 3	1000
Non-manufactures	11	145	Foodstuff	45	41
Manufactured goods	34	824	Chemicals	-42	65
Chemicals	7	84	Textiles	7	187
Textiles	33	63	Metals & allied goods	- 2	206
Metals	40	121	Non-metal mineral products	25	32
Machinery & transport equipment	35	417	Machinery	-24	355
Other	38	139	Miscellaneous goods	27	114

Source: Board of Trade and Bank of Japan.

Appendix IV

1. Indexes of Consumer Prices and Money Supply

Year	UK: Consumer prices (1951=100)	Money supply (1956=100)	Japan: Consumer prices (1952=100)	Money supply (1956=100)
1955			112	89.5
1956	125	100	113	100
1957	130	102	116	104
1958	134	106	115	117
1959	134	110	116	136
1960	136	115	120	164
1961	140	118	127	194
1962	146	122	135	226
1963	149	131	146	304
1964	154	138	151	344
1965	161	148	161	401
1966	168	154	169	462
1967	172	171	176	529
1968	180	183	186	600
1969	190	188	195	724

Source: Annual Abstract of Statistics; and Bank of Japan Economic Statistics Monthly.

Correlation coefficients for Indexes of consumer prices and money supply:
1. 0.9922 for the United Kingdom.
2. 0.9940 for Japan.

2. Percentage Changes in Consumer Prices and Money Supply over the Previous Year

	UK: Consumer prices	Money supply	Japan: Consumer prices	Money supply
1956			0.3	11.8
1957	3.7	2.3	3.1	4.2
1958	2.9	3.2	- 0.4	12.1
1959	0.5	4.4	1.1	16.7
1960	1.0	4.1	3.6	20.3
1961	3.5	3.3	5.3	18.4
1962	4.2	2.6	6.8	16.6
1963	1.9	5.0	7.6	34.5
1964	3.3	7.8	3.8	13.0
1965	4.7	7.6	7.6	18.2
1966	3.8	4.1	5.1	13.9
1967	2.5	10.6	3.9	14.1
1968	4.7	7.2	5.4	13.4
1969	5.4	2.9	5.2	20.6

Source: The same as above.

Correlation coefficients for percentage changes in consumer prices and money supply:

- 0.0391 for the United Kingdom; 0.5396 for Japan.

2. Between annual rates of increase in money supply and wages (See Appendixes X, XI): - 0.4554 (for rates of wage increase one year later, 0.8020) for the U.K.; 0.0082 for Japan.

Appendix V

Percentage Changes in Import, Wholesale, Consumer, and Export Prices over the Previous Year

United Kingdom:

Year	Import prices	Wholesale prices for basic materials	Wholesale prices for finished goods	Consumer prices	Export prices
1951		8.4	17.6		
1952		7.7	2.0	8.9	4.4
1953	- 8.9	-10.0	- 2.0	3.1	-3.2
1954	- 1.0	- 2.0	0.0	2.0	-1.1
1955	3.0	5.1	3.0	3.9	2.2
1956	1.9	2.5	4.2	5.7	3.2
1957	1.9	0.0	3.2	3.7	5.2
1958	- 7.4	- 7.8	0.6	2.9	-1.0
1959	- 1.0	1.3	0.4	0.5	-1.0
1960	0.0	0.1	1.3	1.0	2.0
1961	- 2.0	- 2.2	0.3	3.5	0.0
1962	- 1.0	- 0.6	2.2	4.2	1.0
1963	4.2	2.6	1.1	1.9	2.9
1964	4.0	4.5	0.4	3.3	1.9
1965	0.0	0.5	3.8	4.7	1.9
1966	1.9	2.3	2.6	3.8	3.7
1967	0.0	- 1.9	1.2	2.5	1.8
1968	10.4	10.1	3.9	4.7	7.8
1969	4.3	3.5	3.9	5.4	3.2

Japan:

Year	Import prices	Wholesale prices	Consumer prices	Export prices
1952		3.1	5.6	
1953		0.0	6.3	
1954	- 4.1	-0.7	6.0	-3.6
1955	0.8	-1.8	-1.0	0.0
1956	0.0	4.4	0.3	4.6
1957	0.0	3.0	3.1	-2.7
1958	- 11.8	-6.6	-0.4	-9.1
1959	- 2.9	1.0	1.1	4.0
1960	- 1.0	1.0	3.6	0.0
1961	0.0	1.0	5.3	-3.8
1962	- 3.0	-1.6	6.8	-3.0
1963	3.1	1.8	7.6	2.1
1964	2.0	0.2	3.8	2.0
1965	- 2.9	0.8	7.6	-1.0
1966	2.0	2.4	5.1	0.0
1967	- 1.0	1.8	3.9	1.0
1968	1.0	1.8	5.4	0.0
1969	2.0	2.2	5.2	3.0

Source: UN Statistical Yearbook, Annual Abstract of Statistics and Bank of Japan Economic Statistics Monthly.

Correlation Coefficients

1. Between import prices and wholesale prices (for basic materials only for the U.K.): 0.9695 for the U.K. ; 0.7681 for Japan.
2. Between wholesale prices for basic materials and finished goods in the U.K. : 0.8044.
3. Between consumer prices and wholesale prices (for finished goods in the U.K.): 0.5227 for the U.K.; 0.2785 for Japan.
4. Between export prices and wholesale prices (for finished goods in the U.K.): 0.7851 for the U.K. ; 0.7318 for Japan.
5. Between the import prices of the U.K. and Japan: 0.7937.
6. Between the export prices of the U.K. and Japan: 0.3754.
7. Between the consumer prices of the U.K. and Japan: 0.4566.
8. Between the consumer prices and annual rate of wage increase (See Appendices X and XI): 0.5133 for the U.K.; 0.6340 for Japan.
9. Between the wholesale prices (for finished goods in the U.K.) and annual rate of wage increase: 0.3014 for the U.K.; 0.4550 for Japan.

Appendix VI

Industry Wage Level and Average Size of Establishments in Japan

Industry group	Wage level 1967	Average number of employees per establishment, 1966
Petroleum and coal products	148	73
Iron and steel	142	112
Publishing, printing & allied goods	127	40
Non-ferrous metal goods	119	96
Chemicals and allied products	121	123
Transport equipment	119	121
Mechanical engineering	112	57
Pulp, paper, and paper goods	104	50
Instrument engineering	99	62
Metal goods not elsewhere specified	99	36
Bricks, pottery, glass, cement, etc.	98	49
Electrical engineering	90	100
Rubber products	89	95
Food and kindred products	85	40
Leather and leather goods	85	33
Other manufacturing	83	39
Furniture and fixtures	79	30
Timber and wooden products	77	27
Textiles	67	49
Clothing	59	33

Note:- The industry wage level is for the average monthly earnings of all employees working at establishments with 30 or more employees as an index, the average for all manufacturing industries = 100.
Source: Yearbook of Labour Statistics and Industrial Census.

Correlation coefficient between the industry wage level and average size of establishments: 0.5784.

Appendix VII

Ranking of Industries by Wage Level

	U.K.	Japan	
Vehicles	1	5	
Paper, printing & publishing	2	2	
Metal manufacture	3	1	(Iron & steel)
Chemicals	5	3	
Engineering and electrical goods	6	6	
Bricks, pottery, glass, cement	7	7	
Metal goods n.e.s.	8	4	
Food	9	9	
Textiles	10	12	
Timber	11	11	
Leather goods and fur	12	10	
Clothing	13	13	

Source: See Tables 4-6 and 4-7.

The rank correlation coefficient is 0.8698.

Appendix VIII

Industrial analysis of Great Britain: weekly earnings of full-time manual men paid for a full week in September, 1968

Industry group	Lowest decile £	Highest decile £
All manufacturing industries	16.8	34.3
Vehicles	19.3	35.9
Paper, printing and publishing	17.4	40.5
Metal manufacture	18.0	33.6
Shipbuilding and marine engineering	16.5	36.5
Chemicals and allied industries	16.7	34.1
Other manufacturing industries	17.5	34.5
Engineering and electrical goods	16.8	33.9
Bricks, pottery, glass, cement, etc.	16.8	33.4
Metal goods not elsewhere specified	16.1	33.5
Food, drink and tobacco	16.1	32.9
Textiles	15.6	31.6
Timber, furniture, etc.	15.8	33.3
Clothing and footwear	15.1	29.0
Transport and communication	16.4	34.0
Construction	16.4	35.4
Gas, electricity and water	16.1	28.3
Public Administration	13.7	29.5

Source: Employment and Productivity Gazette.

Correlation coefficient between the lowest-decile and highest-decile industry earnings levels : 0.6310.

Appendix IX

Japan: Average monthly earnings of regular male workers, 1967 by size of establishment and industry, as on index, the average for all manufacturing industries = 100

	No. of workers employed: 5-29	500 or more
Petroleum and coal products	116	121
Iron and steel	114	113
Publishing, printing and allied products	108	133
Chemicals and allied products	115	104
Non-ferrous metal goods	121	99
Transport equipment	105	99
Mechanical engineering	115	98
Pulp, paper and paper goods	102	102
Instrument engineering	107	104
Fabricated metal goods	106	86
Bricks, pottery, glass, cement, etc.	89	98
Electrical goods	105	88
Rubber products	107	86
Food and kindred products	89	101
Leather and leather goods	110	82
Other manufacturing	101	98
Furniture and fixtures	94	76
Timber and wooden products	87	84
Textiles	97	91
Clothing	100	86

Source: Monthly Labour Survey.

Correlation coefficient : 0.3396.

Appendix X

United Kingdom:

Year	Rate of wage increase (ΔW)	Union density (T)	Percentage change in T over the previous year(ΔT)	Unemployment level(U) (in '000)	Unemployment rate (ΔU)	Unfilled vacancies as percentage of the labour force (V)
1953	6.9	44.6	-	-	(2.1)	-
1954	5.8	44.1	- 1.1	-	(1.8)	-
1955	9.5	44.4	0.7	200	(1.5)	-
1956	8.6	44.1	- 0.7	217	(1.2)	-
1957	3.5	44.0	- 0.2	264	(1.3)	-
1958	4.6	43.2	- 1.2	408	(1.6)	-
1959	3.9	43.1	- 0.2	420	1.97	1.02
1960	6.5	43.3	0.5	326	1.50	1.40
1961	6.6	43.3	0.0	287	1.35	1.42
1962	4.0	43.1	- 0.5	406	1.84	0.93
1963	3.0	43.0	- 0.2	497	2.17	0.85
1964	9.1	43.1	0.2	349	1.56	1.37
1965	7.5	43.1	0.0	299	1.32	1.64
1966	7.4	42.5	- 1.4	281	1.38	1.57
1967	2.1	42.7	- 1.2	503	2.21	1.07
1968	8.5	43.3	1.4	542	2.35	1.17
1969	7.5	44.6	3.0	538	2.32	1.23

Note:-1. The rate of wage increase is a percentage increase of average weekly earnings of all manual workers over the previous year.
2. The union density is the percentage of employees in trade unions.
3. The unemployment level is the number of wholly unemployed persons registered.
4. The unemployment rate is the number of registered unemployed as percentage of the labour force. The parethesised figures are from the Ministry of Labour Gazette (monthly averages) and other figures, from the National Institute Economic Review.

Source: Employment and Productivity Gazette and National Institute Economic Review.

Correlation coefficients

1. Between ΔW and T : 0.3622.
2. Between ΔW and ΔT : 0.4277.
3. Between ΔW and U : - 0.3973.
4. Between ΔW and ΔU : - 0.3604.
5. Between ΔW and V : 0.7153.
6. Between ΔU and ΔT : 0.4150.

Appendix XI

Japan:

Year	Rate of wage increase (Δ W)	Union density (T)	Percentage change in T over the previous year (ΔT)	Unemployment level (in '000) (U)	Unemployment rate (Δ U)	Applicant-vacancy ratio (A)
1953	15.3	38.8	-	750	1.9	-
1954	6.5	37.6	-3.1	920	1.6	-
1955	5.2	37.8	0.5	1,050	2.5	-
1956	7.5	35.4	-6.4	980	2.3	-
1957	4.6	37.2	5.1	820	1.9	-
1958	3.1	34.8	-6.5	900	2.1	3.7
1959	6.1	34.9	0.3	980	1.7	2.3
1960	6.8	33.9	-2.9	750	1.4	1.7
1961	11.3	34.5	1.8	660	1.3	1.4
1962	10.3	34.7	0.6	590	1.3	1.5
1963	10.7	34.7	0.0	590	1.1	1.4
1964	10.0	35.0	0.9	540	1.2	1.3
1965	9.5	34.8	-0.6	570	1.2	1.6
1966	10.8	34.2	-1.7	650	1.3	1.4
1967	11.8	34.1	-0.3	630	1.3	1.0
1968	13.6	34.4	0.9	590	1.2	0.9
1969	15.6	35.2	2.3	570	1.1	0.8

Note:- 1. The rate of wage increase is the percentage increase of average monthly earnings of all workers over the previous year.
2. The union density is the percentage of employees in trade unions.
3. The unemployment level is the number of wholly unemployed persons registered with Public Employment Security Offices.
4. The unemployment rate is the above-defined unemployment level as percentage of the labour force.
5. The applicant-vacancy ratio is job applicants as percentage of unfilled vacancies registered with Public Employment Security Offices.

Source: Ministry of Labour.

Correlation coefficients

1. Between Δ W and T : - 0.1097.
2. Between Δ W and Δ U : - 0.6013.
3. Between Δ W and Δ T : 0.3697.
4. Between Δ W and A : - 0.9161.
5. Between Δ W and U : - 0.7105.
6. Between Δ U and Δ T : - 0.3745.

Appendix XII

United Kingdom: Industrial analysis of wage level, union density, unemployment rate, and unfilled vacancies

Industry group	Wage level	Union density	Unemployment rate	Unfilled vacancies
Vehicles	115	(52.0)	1.4	1.1
Paper, printing & publishing	113	60.8	1.3	0.6
Metal manufacture	104	(52.0)	2.2	1.0
Shipbuilding & marine engineering	103	(52.0)	4.6	0.9
Chemicals & allied products	101	N.A.	2.1	0.8
Other manufacturing	99	N.A.	2.4	1.2
Engineering & electrical goods	98	(52.0)	1.8	1.5
Bricks, pottery, glass, cement, etc.	98	N.A.	2.5	0.9
Metal goods not elsewhere specified	97	(52.0)	2.8	1.8
Food, drink and tobacco	94	9.3	2.9	0.7
Textiles	89	33.5	2.3	1.1
Timber, furniture, etc.	89	28.5	3.0	1.1
Leather goods and fur	84	19.2	3.1	1.5
Clothing and footwear	84	39.0	2.1	1.4
Transport and communication	101	51.7	2.1	0.7
Mining and quarrying	96	N.A.	6.0	1.0
Construction	96	21.1	7.8	0.9
Gas, electricity and water	89	N.A.	1.6	0.4
Certain miscellaneous services	83	5.1	1.9	0.6

Note:- 1. The wage level is the industry's average weekly earnings of manual male workers as on index, the average for all manufacturing industries = 100, in April, 1969.
2. The union density is the percentage of employees in trade unions in the industry, at the end of 1968. The parenthesised figure is for all engineering and metal manufacturing industries because union membership for each industry within this group is not available.
3. The unemployment rate and unfilled vacancies are the registered wholly unemployed and unfilled vacancies as percentage of the labour force in the industry, in March, 1969.

Source: Employment and Productivity Gazette.

Correlation coefficients

1. Between the industry wage level and union density : 0.2636.
2. Between the industry wage level and unemployment rate : 0.2636.
3. Between the industry wage level and unfilled vacancies : 0.1803.

Appendix XIII

Japan: Wage level, percentage changes in it over 1958–69, and union density by industry group

Industry group	Wage level	Wage rises	Union density
Petroleum and coal products	148	183	55.0
Iron and steel	142	175	65.7
Publishing, printing, etc.	127	184	30.3
Chemicals and allied products	121	172	69.8
Non-ferrous metal goods	119	182	62.4
Transport equipment	119	153	68.0
Mechanical engineering	112	203	39.2
Pulp, paper and paper goods	104	156	34.0
Fabricated metal goods	99	206	19.2
Bricks, pottery, glass, cement, etc.	98	194	13.2
Electrical engineering	90	156	54.8
Rubber products	89	234	61.5
Food and kindred products	85	N.A.	11.7
Textiles	67	214	39.2
Electricity, gas and water	159	165.	63.5
Transport and communication	126	172	67.0
Finance and insurance	129	141	65.2
Mining	109	165	57.1
Construction	103	220	27.7
Wholesale and retail trades	99	160	8.7

Note:- 1. The wage level is the average monthly earnings of all employees working at establishments with 30 or more employees in the industry, as on index, the average for all manufacturing industries = 100, in 1967.
2. The union density is the percentage of employees in trade unions in the industry, in 1967.

Source: Yearbook of Labour Statistics.

Correlation coefficients

1. Between the industry wage level and union density : - 0.4721.
2. Between the industry wage increases and union density : - 0.3189.

Appendix XIV

United Kingdom: Percentage changes in earnings, unemployment rate, unfilled vacancies over 1959-69 by industry group

Industry group	Earnings	Unemployment rate	Unfilled vacancies
Vehicles	90.6	27.2	57.1
Paper, printing and publishing	85.6	44.4	100.0
Metal manufacture	77.2	-52.3	500.0
Chemicals and allied products	86.2	62.5	60.0
Other manufacturing	81.1	9.1	140.0
Bricks, pottery, glass, cement, etc.	82.2	-10.7	80.0
Metal goods not elsewhere specified	75.1	16.7	-
Food, drink and tobacco	90.1	11.5	75.0
Textiles	82.5	-36.1	175.0
Timber, furniture, etc.	75.5	-11.8	83.3
Leather goods and fur	70.4	19.2	114.3
Clothing and footwear	76.1	- 8.7	100.0
Construction	84.3	56.0	- 10.0
Gas, electricity and water	78.5	45.5	400.0

Note:- 1. The earnings are the average weekly earnings of manual male workers in April, 1968.
2. The unemployment rate and unfilled vacancies are the registered wholly unemployed and unfilled vacancies as percentage of the labour force in the industry.

Source: Employment and Productivity Gazette.

Correlation coefficients

1. Between percentage changes in earnings and unemployment rate : 0.3385.
2. Between percentage changes in earnings and unfilled vacancies: - 0.3683.

Appendix XV

Wage Increases and Productivity Growth in Manufacturing Industry

	United Kingdom:		Japan:	
Year	Rate of wage increase	Rate of rise in output per man-hour	Rate of wage increase	Rate of rise in output per man-hour
1960	9.7	4.7	12.6	7.7
1961	6.1	0.0	12.5	8.4
1962	4.1	2.8	11.1	2.2
1963	4.4	5.2	10.8	8.6
1964	7.6	5.9	11.0	11.0
1965	9.9	4.0	10.8	6.3
1966	5.5	3.1	11.3	9.3
1967	4.6	3.5	12.4	17.0
1968	6.7	6.2	15.5	12.5
1969	8.3	3.0	17.9	15.2

Note:- The rate of wage increase is that of hourly earnings (male workers only for the U.K.).
Source: National Institute Economic Review.

The correlation coefficient between the two sets of observations is : 0.2035 for the U.K.; 0.5895 for Japan.

Appendix XVI

Percentage Increases in Wages and Productivity by Industry Group

United Kingdom: 1964-69

Industry	Wages	Productivity
Agriculture, forestry, and fishing	39.9	43.0
Mining and quarrying	29.0	19.2
Food, drink & tobacco	39.8	17.1
Chemicals & allied	40.0	33.6
Metal manufacture	36.3	8.1
Engineering & electrical	35.7	27.1
Shipbuilding	48.1	- 2.1
Vehicles	36.8	14.6
Metal goods n.e.s.	37.0	4.2
Textiles	39.0	29.9
Leather, fur, etc.	29.5	1.4
Clothing & footwear	34.0	7.7
Bricks, pottery, etc.	36.4	15.4
Timber, furniture, etc.	33.0	- 1.5
Paper, printing & publishing	38.3	10.2
Other manufacturing	37.3	14.4
All manufacturing	37.4	16.7
Construction	38.5	16.5
Gas, electricity & water	28.1	32.4
Transport & communication	44.6	19.5
Miscellaneous services	37.6	5.2

Japan: 1964-68

Industry	Wages	Productivity
All industries and services	12.1	10.2
Mining	13.1	7.9
Construction	15.7	8.0
Manufacturing	11.9	11.6
Food	11.7	7.5
Textiles	11.9	10.7
Paper and pulp	11.4	12.1
Petroleum refining	11.7	14.5
Ceramics	11.4	9.6
Chemicals	11.2	16.6
Iron and steel	10.9	13.2
Machinery	13.4	10.8
Electrical goods	14.0	12.6
Transport equipment	10.6	12.2
Instrument engineering	12.0	10.7
Distributives trades	11.9	9.4
Transport	10.5	6.9
Private railways	10.6	5.9
Electricity supply	13.2	12.0
Gas supply	12.0	14.4
Services	16.7	7.0

Source: National Institute Economic Review, no. 55 (1971); Ministry of Labour, Rodo Hakusho.

Correlation coefficients between average earnings and output per employee: - 0.0016 for the U.K.; - 0.2037 for Japan.

Appendix XVII

UK: Regional wage level and unemployment rate

Region	Wage level	Unemployment rate
South East	107	2.1
East Anglia	93	2.2
South Western	92	2.7
West Midlands	104	2.7
East Midlands	97	2.3
Yorkshire & Humberside	95	3.2
North Western	99	3.1
North	96	5.7
Wales	97	4.4
Scotland	95	4.6

Japan: Wage level and ratio of job applicants to vacancies by region

Region	Wage level	Ratio
Hokkaido	99	1.1
Tohoku	82	2.9
Southern Kanto	119	0.7
Northern Kanto	84	0.6
Hokuriku	84	1.2
Tokai	94	0.4
Keihanshin	114	0.8
Kinki	96	0.7
San-in	76	1.5
San-yo	92	0.9
Shikoku	83	2.0
Northern Kyushu	91	3.1
Southern Kyushu	80	4.2

Note:-1. The regional wage level in Britain is for median earnings of full-time adults paid for a full week as percentage of the median for Great Britain as a whole, September, 1968.
2. The regional wage level in Japan is for the average annual income of employees in 1968.

Correlation coefficients for the regional wage level and unemployment rate or applicant-vacancy ratio:

1. - 0.2733 for Britain.
2. - 0.1326 (Northern Kanto, Tokai, and Kinki excepted, - 0.5787) for Japan.

Source: Employment and Productivity Gazette; and Ministry of Labour.

Appendix XVIII

The Starting Pay and Demand for Middle-school Leavers during 1958-69 and by Region, 1969, in Japan

Year	Percentage changes in starting pay	Vacancy-applicant ratio	(Regional analysis) Region	Starting pay level, 1969	Vacancy-applicant ratio
1958	2.2	1.2	Hokkaido	89	1.6
1959	5.3	1.2	Tohoku	86	1.5
1960	16.1	1.9	Southern Kanto	103	6.4
1961	22.7	2.7	Northern Kanto	101	3.5
1962	25.0	2.9	Hokuriku	98	3.3
1963	10.9	2.6	Tokai	100	10.6
1964	12.8	3.6	Keihanshin	102	9.7
1965	18.6	3.7	Kinki	100	4.9
1966	6.8	2.9	San-in	90	1.4
1967	10.8	3.4	San-yo	100	5.7
1968	13.9	4.4	Shikoku	97	1.5
1969	17.2	4.8	Northern Kyushu	92	1.6
			Southern Kyushu	76	0.8

Source: Ministry of Labour, Shinkigakusotsusha Shoninkyu Chosa.

Correlation coefficients

1. 0.1967 for percentage changes in starting pay and vacancy-applicant ratios over time.
2. 0.6897 for regional starting pay level and vacancy-applicant ratio.

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