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MEDIUM AND SMALL-SCALE INDUSTRY
IN THE JAPANESE ECONOMY

by

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P R E C I S

This thesis is a study of the nature, development and implications of medium and small scale industry in the Japanese economy.

Medium and small scale industry in Japan is the product of development of the native sector of industry, whereas large scale industry was introduced from the west with government assistance and with little reference to the background of development within Japan. The development of medium and small scale industry is thus the history of the adaptation of native industry to changes in Japan's economic organisation.

Corresponding to the stages of cottage industry, dispersed manufacture and small factory industry, various forms of industrial organisation have been evolved and still survive in medium and small scale industry. These forms are based on varying degrees of dependence on either commercial or industrial capital.

Although, as part of the war organisation of industry, the Japanese government tried to accelerate the formation of industrial capital by authoritarian means, absolute shortage of capital and overpopulation have resulted in relatively slow and inefficient methods of industrialisation in a large sector of Japanese industry.

So long as these factors continue to operate medium and small scale industry will remain a large part of the Japanese economy, and an intractable problem of economic policy.

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MEDIUM AND SMALL SCALE INDUSTRY IN THE JAPANESE ECONOMY

Chapter I Introductory

To the traveller or to the student, Japan presents an odd mixture of East and West. The contrast between what is traditionally Japanese and what is obviously western extends into almost every sphere of Japanese life. Sometimes the two form a harmonious synthesis. More often the foreign observer receives an uneasy impression of incongruity.

Nowhere is the contrast more marked than in the field of production. Large modern factories, obviously western in organization and technique, exist side by side with small workshops producing traditional Japanese products by traditional Japanese methods. Although large-scale modern enterprise on the western pattern now occupies a dominating position, the bulk of Japanese industry is carried on in forms which represent a development of native Japanese types of industrial organization. These types of industrial activity are known collectively as "medium and small scale industry".

Whereas large scale western industry was introduced fully grown, as it were, with little reference to conditions within Japan, medium and small scale industry

has evolved its own forms of organization in response to the changing environment of Japanese economic life. This study is an examination of the development and structure of this "native" sector of industry, as an approach to some of the problems of Japanese industrial organization in general.

The chief of these problems is that of the development and adjustment of a native economy into which large scale western industry is suddenly introduced. In England, large scale industry is a result of the development of the English economy itself. Japanese large scale industry, on the other hand, is not a result of the historical development of the Japanese economy, but was introduced from abroad at a time when Japanese industry was still in the stage of cottage industry⁽¹⁾. The problem of the adjustment of the native economy to the impact of modern industrialization has therefore arisen in a particularly acute form in Japan.

This is the essence of that "Medium and Small Scale Industry Problem" with which Japan is now confronted. Its statement in so bald a form raises a large number of questions which it will be the aim of this study to consider. This introductory chapter is intended to make clear at the outset the nature and extent of a large, and, to western readers, possibly unfamiliar area of the Japanese economy.

(1) See below, Chapter II.

(i) The quantitative importance of medium and small scale industry in the Japanese economy

Although small scale industry plays a passive role in an economy in which the driving force comes from principles quite alien to small business, its quantitative importance is, by any criterion, very great. Over the whole field of production, including manufacturing industry, agriculture and fisheries, the proportion of enterprises employing more than 30 workers is negligible. In commerce, as might be expected, small establishments form the great bulk of the total. In 1947 only 0.3% of commercial establishments employed more than 30 workers.⁽²⁾

In manufacturing industry, which is the sector most relevant here, Table I gives an idea of the overwhelming preponderance of small establishments.

(3)
Table I - Distribution of manufacturing establishments by scale

Year	Total No. of establishments	Percentage per size group by No. of employees				
		5-9	10-29	30-99	over 100	Total
1909	32,228	52.1	33.5	10.8	3.6	100
1914	31,717	46.2	36.4	13.1	4.3	100
1919	43,949	45.8	35.6	13.5	5.1	100
1924	48,394	48.4	33.9	12.6	5.1	100
1929	60,275	55.4	28.9	11.3	4.4	100
1934	80,880	56.5	29.0	10.7	3.8	100
1938	113,205	57.3	28.8	10.2	3.7	100

(2) Scrifu (Prime Minister's Office), "Jigyosho Tokei Chosa" (Establishment Statistics) 1947.

(3) From Koide, "Statistical material on industrial establishments" (in Japanese).

It will be noticed that the proportion of establishments employing between 5 and 30 workers is large (about 85%) and shows no tendency to fall over a period of thirty years during which the Japanese economy underwent considerable structural change. Since the earlier statistics do not include establishments employing less than 5 workers the preponderance of the smallest is greatly understated. The following table gives a truer picture.

(4)

Table 2 - Distribution of manufacturing establishments by scale

Year	Total No. of establishments	Percentage per size group by No. of employees				Total
		1-4	5-30	30-200	over 200	
1930	568,473	89.0	9.3	1.4	0.3	100
1940	692,227	80.4	17.1	2.1	0.3	100
1947	618,546	82.3	16.0	1.4	0.3	100

Impressive though these figures are, even they do not tell the whole story, since the 1930 census records 665,000 one-man manufacturing establishments, most of which probably employed some family labour. If these are included, the proportion of establishments employing more than 30 persons becomes altogether negligible.

(4) 1930 figures from "Kojo Tokei Hyo" (Factory Statistics), 1930, published by the Ministry of Trade and Industry. Figures for 1940 and 1947 are from "Kogyo Tokei Hyo" (Industrial Statistics) issued by the same source.

(5) "Kokusei Chosa Hokoku" (Census Report), 1930.

As might be expected, the larger plants make a much better showing as employers of labour. Table 3 (which does not include plants employing less than five persons) indicates how the proportion of industrial workers employed in the largest establishments has increased. For reasons which will be discussed later, the proportion of the labour force engaged in establishments employing between 5 and 30 persons fell rather sharply over the period of the first World War, but has since remained fairly steady; while the largest plants made their most rapid gains in the post-war period and again during the Pacific War.

(6)

Table 3 - Distribution of industrial labour by scale of workplace

Year	Total No. of Workers	Percentage per size group by No. of employees					
		5-9	10-29	30-99	100-999	over 1000	Total
1909	800,637	13.5	21.3	21.7	29.6	13.9	100
1914	948,265	9.9	19.5	22.0	31.6	17.0	100
1919	1,611,990	8.5	16.2	19.7	32.8	22.8	100
1924	1,879,618	8.6	14.7	17.1	32.1	27.5	100
1929	2,089,786	10.2	14.2	17.3	32.7	25.6	100
1934	2,325,705	11.0	16.1	18.2	30.4	24.3	100
1938	3,311,277	10.1	16.1	17.2	30.2	26.4	100

Table 4 shows the changes over the Pacific War period and includes the smallest establishments employing 1-4 employees.

(6) Koide, op. cit. and Kori "Statistical Appendix on Factory Establishments".

(7)

Table 4 - Distribution of industrial labour by scale of workplace

Year	Total No. of Workers	Percentage per size group by No. of employees				
		1-4	5-30	31-200	over 200	Total
1930	3,362,633	40.2	16.1	17.5	26.4	100
1940	4,987,000	22.9	22.5	18.8	35.8	100
1947	4,626,000	22.0	27.9	23.5	26.6	100

Small plants thus employ about half of the industrial labour force, but they produce only about a (8) third of all manufactured products, as compared with about one quarter produced by the very small number of plants (9) employing over a thousand employees. Since small scale industry is concerned mainly with finished products (particularly in the field of light industry) its importance as a producer of exports is considerable. A Japanese writer

(7) 1930 figures from the Factory Statistics. 1940 and 1947 figures from the Industrial Statistics.

(8) By value. See Koide in "Chusho Kogyo no Shorai" (The Future of Medium and Small Scale Industry) Tokyo, 1942; p.284.

(9) Since these very large plants employ together only about half the numbers employed in the small plants (1-30 employees), productivity per head appears to be considerably greater than that of the smaller establishments. The disparity is, in fact, not so marked since the figures include in the product of large firms a certain amount of work done by small "sub-contractors" (q.v.)

(10)
 estimates that before the Pacific War (1931-3) small scale industry produced directly about 65% of Japan's exports. It may be presumed to have made also a significant indirect contribution through participation in sub-contracting for larger firms. Owing to changes in the composition of Japan's exports since the war, small scale industry's direct contribution has fallen to about 50%, although if the indirect contribution is included there has probably not been any great change.

The quantitative importance of small scale industry in employment, production and foreign trade is thus considerable. Nearly all manufacturing establishments are small, these small producers employ over half of all labour employed in industry and they produce about one-third of all industrial products. In America, by way of

(10) Takahashi Kamekichi, "Gendai Chusho Kogyo Ron" (Modern Medium and Small Business) Tokyo, 1936; p.34.

(11) The most significant change has been from textiles to engineering. Before the war (1934-1936 average) textiles provided 52% of exports and metal products 8.2%. In 1951 the proportion of textiles had fallen to 44% and metal products had risen to 18.7%. (White Paper on Trade (Tsusho Hakusho) 1952, issued by the Ministry of Trade and Industry).

(12) According to Toda "Exports and Small Business" in Keizai Chosa, January, 1953, p.28, issued by the Daiwa Bank.

contrast, establishments employing less than 100 persons, although numerous (about 99% of the total) employ less than half of all employed labour and produce less than one-tenth of all production.⁽¹³⁾ This difference is often taken to be a measure of Japan's industrial backwardness, but it also indicates that, in Japan at least, the study of such a large area of the economy is likely to provide a valuable key to an understanding of the economy as a whole.

(ii) The problem of definition

In a study of this kind, it is desirable, at an early stage, to define the object of study and to state clearly what has been taken to fall within its scope and what has not. In the case of Japanese medium and small scale industry this is by no means an easy task. As the previous section showed, the numbers involved are so enormous that little outward uniformity can be expected. It is, however, quite clear that the concept of "medium and small scale industry" has a very real and more or less well-defined meaning in Japan; but it is not a simple concept, and,

(13) Cf. A.D.H. Kaplan, "Small Business, Its Place and Problems" New York, 1948; p.11.

although it is hoped that its content will become apparent in the course of subsequent discussion, some attempt at its definition may properly be expected at this stage.

Indeed, one standard of definition has already been implied, since the number of employees was taken to be a measure of size by which medium and small industry might be distinguished from large scale industry. This is, in fact, the most commonly used criterion, partly because the available statistical material classifies establishments in this way. Since the number of persons employed is subject to measurement, it appears, superficially at least, to be a suitable yardstick by which establishments may conveniently be classified as large, medium or small. The difficulty lies in picking the particular number of employees which makes an establishment "medium" rather than "small" or "large" rather than "medium". If this is to be used as a yardstick, it must be a very elastic one, since the number of employees which constitutes a "small" establishment must vary from one industry to another. A plant employing 30 persons would, for example, be considered large in, say, the motor repair industry, but not in the ship-building industry. Although the strict relevance of such a criterion must be considered doubtful, it has been widely used because of its convenience. Most Japanese writers, while pointing out that the division is more or less arbitrary, take

establishments employing less than 30 persons as "small", those employing 30 to 100 (or 200) as "medium" and those employing more than 100 (or 200) as "large".⁽¹⁴⁾

Other criteria based solely on some measure of size, although often useful for a particular purpose, are liable to the same kind of objections. Production, either by value or by volume, is difficult to use as a measure, since value varies greatly as between industries, and the volume of production cannot be used over a long period or where widely differing products have to be compared. Moreover, small plants in the engineering industry, for example, are typically engaged on processing

(14) See, e.g., Tasugi Kiso, "Shitsuke-sei Kogyo Ron" (Sub-contracting Industry) Tokyo, 1941; Yamanaka Tokutaro, "Chusho Kogyo no Honshitsu to Tenkai" (The Nature and Development of Medium and Small Scale Industry) Tokyo, 1948; Komiyama Takuji, "Nihon Chusho Kogyo Kenkyu" (A Study of Japan's Medium and Small Scale Industry) Tokyo, 1941; Chusho Kigyo Cho (Bureau of Medium and Small Business), "Chusho Kigyo no Ichi to Mondaiten" (The Position and Problems of Medium and Small Business), Tokyo, 1950.

work which does not readily lend itself to measurement.

(15)

The amount of capital at its disposal or the quantity of its equipment can also give a clue to the classification of any particular establishment, but, except in extreme cases, size alone does not turn out to be a very enlightening basis for classification.

Qualitative criteria, though not so readily amenable to statistical treatment, go further towards explaining the meaning of "medium and small scale industry". It is possible, for example, to distinguish small scale from large scale industry by the methods of production used. Handwork and craft methods are typical of small scale industry, whereas mass-production and conveyor-belts are not. The type of labour employed is also a guide. The use of family labour and apprentices is more typical of small scale than of large scale industry. Again, a distinction may be made according to the form of business organization. An individual enterprise, where one man is at once the owner, manager, accountant, and probably operates a machine as well, must be regarded as small. On the other hand, an

(15) In 1934, for example, establishments with capital of up to 1000 yen were considered "small"; those with 1000 to 500,000 yen "medium"; and those with over 500,000 yen "large" (\$1 = ¥3.96). In 1952, up to 500,000 yen was considered "small"; 500,000 to 10 million yen "medium"; and over 10 million yen "large" (\$1 = ¥360).

enterprise organized as a limited liability company with a large number of shareholders, a board of directors, a general manager, departmental managers, branch managers, secretaries, accountants and so on, must certainly be regarded as large.

In general, then, we may say that small scale industry (in contrast to medium and large) is characterized by a low standard of technique and a tendency to rely on manual skill rather than precision machinery, by poorly paid labour of poor quality, including a fair proportion of family and apprentice labour, working long and irregular hours in a "factory" which is often part of, or an annexe to, the proprietor's dwelling and by the absence of any definite business organization or proper book-keeping. The proprietor himself has little in common with the capitalist owner of a large enterprise. The typical proprietor in small scale industry has much more in common with his own workmen, with whom he works, eats and often lives. Normally his attitude to his business is pre-capitalistic rather than capitalistic in the modern sense. He does not differentiate business from household accounts and regards his earnings as a livelihood rather than as a profit.

Small scale industry may be recognized by such internal characteristics as these, but medium scale industry is often of quite a different nature. A "medium" sized plant

may be well equipped and run in a thoroughly modern and business-like fashion. Looked at in isolation a "medium" scale establishment bears little outward resemblance to the back-yard workshop typical of "small" industry. In Japan, however, the phrase "medium and small scale industry" stands not for medium scale industry and small scale industry, but for a single concept, which, while including the most heterogeneous components, stands in a single particular relationship to the economy as a whole and is subject to a single set of problems peculiar to itself.

There must, therefore, be some characteristics common to medium and small scale industry as a single category, to be sought not so much within individual establishments, as in the external relationships of this category to other sections of the economy and to the economy as a whole. The most striking of these relationships is that passive position of medium and small scale industry in relation to the rest of the economy which has already been mentioned. Why this is so and how it came about can be explained by reference to the historical process of Japan's economic development and in particular to the peculiarities of the formation and development of industrial capital since the opening of intercourse with the industrial nations of the West. These questions form the subject of the next chapter. It is sufficient to say here that medium

and small scale industry together form the passive part of Japanese industry, subject to the pressure of economic forces over which they have little control. This characteristic passiveness is an important ingredient of our definition. At the same time the heterogeneity of medium and small scale industry reflects within itself the variety of Japan's economic development.

The concept of medium and small scale industry may be given further precision by a statement of the conditions which permit, and even favour its continued existence in Japan. With the advance of industrialization in the industrial countries of the West, small scale industry has shown a steady long-run tendency to decline in importance. This has not been the case in Japan. Although Japanese economists of a generation ago (perhaps more familiar with the experience of the West, particularly of Germany, than with conditions in their own country) continually predicted the decline of small scale industry, it has, in fact, shown a remarkable capacity for survival over the last fifty years in spite of the progress of industrialization. Not only have traditional small scale industries survived, but small scale industry has become important in such "modern" industries as engineering and the manufacture of motor vehicles. To a great extent, the conditions which permit this survival are to be found in peculiarities of the

markets for factors of production and for products, above all, in the markets for capital and labour. It is the overall shortage of capital and abundance of labour which, more than anything else, supports the continuance of labour intensive methods of production and strictly limits the possibility of economies of scale.

The importance of the conditions of labour and capital supply is emphasised throughout this study, but since they are general over the whole economy, they are less appropriate to a definition of medium and small scale industry than more particular market conditions. Of these an important factor is the varied and scattered nature of home demand for consumption goods. The Japanese demand great variety in all types of commodities of everyday consumption. This is particularly true of textiles for Japanese native dress, but it applies also to all household articles. Since the type of product demanded varies also from one part of the country to another, the home demand for consumption goods is split up into a large number of very small and fairly definitely distinct markets. This limits the possibilities of economies of large scale, and where such conditions obtain we may expect to find production being carried on in small or medium sized units. Large fluctuations in demand have the same sort of effect in limiting the economies of large scale production.

Seasonal fluctuations in internal demand for consumption goods and, on a larger scale, fluctuations in export demand, are very marked in Japan. Again, many typically Japanese products require a technique which does not lend itself to large scale operations, and these products (bamboo and paper products for example) tend to be important export industries.

The remaining sections of this introductory chapter outline the forms of organization typical of medium and small scale industry; medium and small scale industry as the subject of a problem, and as an integral part of the Japanese economy. This should help to clarify a concept of medium and small scale industry on which discussion can be based.

(iii) Forms of medium and small scale industry

The dependent and passive position of medium and small scale industry in the Japanese economy has already been remarked upon in a general way. More concretely, what form does this dependence take? Since our subject matter is so vast and heterogeneous we may expect to find considerable variety, and any classification must be regarded as no more than a broad division for limited purposes. One such classification is employed for purposes of description, in Chapter III, and will be used for the preliminary survey

in this section. It does not pretend to be in any way comprehensive and any classification which could make that claim would certainly be too unwieldy to be useful. While it is recognized that other kinds of classification may be useful for particular purposes, that used here has been selected because it shows most clearly the structure of that pyramid of dependence which is so important to the understanding of Japan's industrial structure and medium and small scale industry's place in it. ⁽¹⁶⁾

Although the dependent nature of medium and small scale industry is emphasised, the control exercised over it from above varies considerably in strength and in directness. We may, therefore, distinguish those cases in which pressure from above is appreciable and direct from those in which it is very slight and indirect. The former will be called "dependent forms" and the latter "independent forms", although the distinction is one of degree and the two tend to shade into one another.

(16) No originality can be claimed for this classification. It seems to have been formulated originally by Professor Komiyama (op. cit. p. 7) and has since been used (with individual modifications) by several Japanese writers.

Independent forms are of two main types. First, and by far the more important numerically, are the very small scale producers who work by handicraft methods for direct sale to the consumer. This includes most trades which make to order, such as tailors, blacksmiths and motor repairs. They are able to survive because the nature of demand and technique do not permit larger scale operations. They are operated by a master, who probably employs some family labour and possibly an apprentice or two. Since they sell directly to a fairly large number of individual customers they are independent as far as sales are concerned, or, to use Mrs. Robinson's word, they are not subject to "monopsonistic exploitation". Although such businesses are numerous in Japan, they are as much of the nature of retail trade as of industry and so barely fall within the scope of this study. In any case, since they are common in almost any economy they do not seem to call for any particular explanation.

(17) The Japanese word Oyakata has been translated as Master, but this does not quite convey the meaning, which has something of the connotation of Boss, as in the phrase "Union Boss". The word is a survival from earlier times when the Oyakata was the "boss" of a workshop or group of workshops in a locality, to whom the other members and his own apprentices owed a kind of allegiance and whose duty it was to protect the interests of the group.

(18) Joan Robinson, *The Economics of Imperfect Competition*. London 1933. "Monopsony" is used to describe a market situation in which one buyer is able to influence the market by reason of his being the only buyer and is analogous to monopoly, where the same sort of influence is exercised by an only seller.

In another category are those forms of medium and small scale industry which produce on a medium rather than a small scale, and for a market rather than to order, which are still able to operate independently, since the higher strata of the economic pyramid lack either the incentive or the power to exercise control. In this category may be placed those enterprises which are protected by patent rights or by a well-established reputation. Such independent producers must be very rare in Japan.

"Independence" has here been taken to refer to the freedom of action of a single enterprise. It may also be conceived of as the freedom of a whole industry from the competition or pressure of large scale industry, and it has, in fact, been so treated by some writers.⁽¹⁹⁾ The significance of the dependent position of medium and small scale industry is not, however, limited to those cases in which it operates within an industry controlled by a few large firms, but is concerned with its dependent position within the economy as a whole. Those very numerous small establishments which, while free of any

(19) See particularly Chusho Kigyo Cho (Bureau of Medium and Small Business) "Chusho Kigyo no Ichi to Mondaiten" (The Place and Problems of Medium and Small Business) pp. 80-85, where some cotton goods, miscellaneous textiles, silk and artificial silk textiles are included amongst independent forms, although individual producers in these fields are clearly dependent on commercial capital (see below, pp. 93 foll.)

direct control or competition of large scale industry, are none the less restricted by a chain of dependence upon commercial capital, should not be classed as independent. Such a classification would tend to obscure their true position in the economy. In any case, the two chains of dependence on industrial and commercial capital are, to a large extent, linked by the fact that the most powerful concerns at the top of our pyramid typically combine control over both industrial and commercial undertakings.

These two systems of dependence should, however, be distinguished when we come to consider dependent forms of medium and small scale industry. Dependence on commercial capital is generally referred to as the Tonya System, the term being derived from the fact that the commercial capitalist on whom the small establishments depend is normally a Tonya, in fact if not always in name. The word Tonya is usually translated as "wholesale merchant" and the earliest Tonya seem to have been more concerned with distribution than with actual production. At a very early stage, however, those Tonya near the centres of production undertook the organisation of production itself and the transport of

(20) The legal definition of Tonya is "one who carries on a business of buying and selling goods for others under his own name".

the products to the centres of consumption. There have thus come to be two kinds of Tonya, known respectively as "Production Tonya" and "Consumption Tonya".⁽²¹⁾ The former organise production and sell to the latter, who are wholesale merchants pure and simple.

Originally very similar to the Verlagssystem or putting-out system familiar to students of European economic history, the Japanese Tonya system, in adapting itself to changing circumstances, has come to take several forms. The earliest Tonya system was based on rural cottage industry and this form is still important. The Tonya supplies whatever materials are not available on the farm itself and often whatever simple equipment is necessary to households in poorer rural areas, and the work is done by farmers and their families in whatever time they can spare from their agricultural work. Often this work is an indispensable supplement to the income of such rural households. The Tonya collects the finished work and pays for it at piece work rates, often making deductions for rent of equipment or for interest on advances. In this way many of the hand-woven silk textiles used for Japanese native dress are produced, but the system is by no means confined to silk weaving.

(21) Those engaged in export trade are known as "Export Tonya" but are a kind of consumption Tonya.

Wood and bamboo products, pearl-shell buttons, and even cutlery are made in this way. These rural producers are entirely dependent on the Tonya and opportunities for exploitation by an unscrupulous Tonya are obviously wide. They might be expected to enjoy large profits, but in fact profit is small, since most of what they are able to squeeze out of the peasants under their control is in turn squeezed out of them by the merchants in the large cities to whom they sell, and so on, up the line until the profits are either finally reaped as a monopoly return by a powerful exporter or merchant house (probably a Zaibatsu interest), or are dissipated in the high gross profit margins necessary to support an excessive number of small retail shops.

A very similar form of organisation is found in the large cities where slum labour takes the place of poor agricultural labour. Although there are examples of (22) weaving being carried on in this way in cities, more typical products are celluloid toys, match boxes, embroidery and thongs for Japanese wooden footgear. Production is by handwork methods. Such work is regarded as a by-employment rather than as a main source of income. Conditions are bad and the system often results in "sweating". These types of pre-modern handwork home-

(22) e.g., the lower strata of the Nishijin silk weaving industry in Kyoto.

industry were common in Europe in the very early years of the Industrial Revolution and have survived in Japan, partly because of the survival of a demand for pre-industrial products but, more fundamentally, because of the existence of pools of excess population under the necessity of supplementing their income by such work.

These forms are known as the "Old Tonya System" to distinguish them from other forms of industry, which, though similar in their dependence on commercial capital (Tonya), are altogether more "modern" and arose during and after the industrial revolution in Japan. Because the methods of production employed belong to the machine-age rather than to pre-industrial times, such forms of organisation are called the "New Tonya System" of production. The New Tonya System is distinguished by the use of power machinery (lathes, power looms), rather than handwork, full-time rather than part-time labour, employed rather than family labour and some separation of the workplace from the dwelling. The typical unit of production under this system is, in fact, a factory in the true sense, although usually a small one. These small factories are dependent on the Tonya for orders, often for materials and sometimes for finance as well. The Tonya is still a commercial capitalist, but is more

integrally connected with the production process than the "Old" Tonya and may even have a factory of his own in which he makes some part or performs some process of production, frequently assembly and packing. Some industries organised in this way (e.g. power weaving, pottery, tiles and pipes) developed by mechanisation of industries formerly carried on under the Old Tonya System. More often, however, they were mechanised from the start (e.g. bicycles, enamel-ware, electric light globes and sewing machines). This form of organisation shows clearly the stratified structure of Japanese industry, since factories which are themselves dependent on Tonya frequently put out some simple processes to part-time home workers.

In contrast to the Tonya System which is distinguished by dependence on commercial capital, those forms of medium and small scale industry which are dependent on industrial capital are known as the "Sub-contracting
(23)
System" because they are based on a system of sub-letting of orders from larger factories to smaller. This system shows the pyramidal structure at its clearest and is found in its most typical form in the engineering industry. At the base of the pyramid is a very large

(23) A translation of Shitauke-sei-kogyo.

(24)

number of very small back-yard workshops which seldom possess the equipment to produce anything saleable in a general market. Such workshops perform only one or two simple processes, such as rough machining or simple stamping or pressing. They receive work, and from the nature of the processes this normally includes the material, from a larger factory, rather better equipped, which has in turn received orders either for processing or for the manufacture of some small part from another factory higher up the scale which may be making parts or even complete products as the sub-contractor of a large-scale establishment which has received orders from a government department, overseas buyer, or is possibly producing for general sale on the home market. Thus a machine or a motor-car, for example, may be the product of four or five or more successive stages of sub-contracting, each stratum of sub-contractors being dependent for its orders, materials, finance and sometimes even equipment and technical aid, on the strata above it. These parent factory-sub-contractor relationships will be examined in detail in Chapter III.

The aim of this section has been to show briefly how the chains of dependence of medium and small scale industry on commercial capital on the one

(24) In Japanese known as Machi-kojo.

hand, and on industrial capital on the other, are embedded in and perpetuated by the forms of Japanese industrial organisation, and to demonstrate the mechanism by which a vast but passive mass of economic activity is controlled by a comparatively very small number of powerful economic interests.

(iv) Medium and small scale industry as the subject of a problem

This introductory description has so far approached the problem of defining medium and small scale industry from an objective point of view. Since, however, medium and small scale industry is generally thought of as the subject of a problem, the concept contains a considerable subjective element, and its meaning is fully intelligible only in the context of the problem. This problem is continually changing and there have been corresponding changes in the significance of the phrase "medium and small scale industry". What are the problems in connection with which the concept has been formulated and by what process has it reached its present form?

(25)

(25) For much of the information contained in this section I am indebted to Professor Yamanaka's excellent discussion in op. cit. Chapter 3.

The idea of medium and small scale industry as such is of recent origin. It became fairly definite in the 1930's and probably does not date back further than the 1920's. Before that time attention was focused on small scale industry and, earlier still, on native industry. It is a truism to say that there can be no problem of small scale industry apart from the existence of large scale industry. When, towards the end of the nineteenth century, western industry was introduced into Japan, it was on a scale larger than anything which had hitherto existed in that country. At first, however, it was not the difference in scale which attracted attention. The possibility that economies of large scale production on western lines might threaten the existence of small scale native production must have seemed very remote to Japanese in the early years of the so-called industrial revolution. On the contrary, it was the newly introduced western industry, regarded as necessary for the creation of an economy able to withstand foreign pressure, which was in need of protection and careful fostering. Small scale industry, then thought of as native industry (in contrast to "western" or "mechanised" industry), was regarded as comparatively stable and able to take care of itself. By the late 1880's, however, there arose a fear that the strains and anomalies already becoming

apparent as a result of the hasty introduction of western industry, might adversely affect native industry, at that time practically the sole source of the exports necessary to sustain the programme of importing industrial potential from abroad. In this period small scale (hand and cottage) industries first became an object of concern, but they were thought of as native industries to be encouraged and
(26)
organised for export markets.

By the end of the industrial revolution period, that is to say roughly about the time of the first World War, the structure of the Japanese economy and its problems had changed. Although hand production and agriculture were still important, capitalist western style production had become the driving force in the economy. This change raised new social problems of small scale industry which was by that time thought of in contrast to large and medium scale industry. Large and medium scale industry was regarded as progressive, while small scale home industry was regarded as a social evil. Female and juvenile labour, sweated labour and slum conditions were the problems generally associated with
(27)
small scale industry. The question whether small scale

(26) This attitude to small scale industry appears very clearly in Maeda's Kogyo Iken (Ministry of Commerce and Agriculture 1885) and in his later Shoken (1893)

(27) See, e.g., Yokoyama Gennosuke, "Nihon no Kaso Shakai" (The Lower Classes of Japan), Tokyo, 1898, which is a survey after the models of Booth and Rowntree.

industry would disappear or not and whether or not it should be supported was also raised, but the techniques of study and, to a large extent, the problems themselves, were imported from Europe and corresponded only vaguely (28) to actual conditions in Japan.

Although what may be called the European approach to these problems persisted for a long time, the end of the first World War saw a considerable change in the content of the small scale industry problem. The war boom alleviated the social conditions. The prosperity and the great spurt in capital accumulation associated with the war boom resulted in the mechanisation of many industries which up to that time had been characterised by hand methods of production either in the form of cottage industry or of "manufacture". By this process a large section of medium and small scale industry lost the character of hand and cottage industry and took the forms which we have called the new Tonya system and the sub-contracting system of organisation. In the depression

(28) At the annual conference of the Social Policy Association (Shakai Seisaku Gakkai) of 1917 such subjects as these formed the topics of discussion. The influence of the German historical school (particularly of Buecher) is obvious in the contributions of men like Dr. Ueda Teijiro, a leading scholar of those days, unfortunately known to English readers only by a rather superficial monograph largely the work of his students. (The Small Industries of Japan, I.P.R. New York, 1938).

which followed the war these newly mechanised small establishments received a severe set-back, while, at the other end of the scale, the concentration of large scale finance capital proceeded rapidly. The conditions thus arose under which Japanese social and economic thought and policy were faced for the first time with the problem of the existence of medium and small scale industry in an economy controlled by what it was then fashionable to call monopoly finance capitalism. Thus our problem became explicit in the period of rapid change after the first World War. It includes the problems of home and hand industry and the social problems of the industrial revolution period, but it has become a problem of management rather than of labour, a problem of economic organisation rather than of social conditions. It has, in fact, become the problem of "medium and small scale industry".

The end of the prolonged post-war depression in Japan coincided with the beginning of a controlled economy which later came to be called the "Quasi-War Economy". The initiation of a controlled economy produced a new attitude to medium and small scale industry. The social side of the problem tended to fade into the background and the problem became primarily a problem of production - direct military production and the production of the exports necessary to cover an expanded import programme - and of the part which small

establishments should play. Where small plants were not considered capable of making any useful contribution, the problem was to divert labour and capital from them to more productive sectors - the so-called "Re-employment Problem". Where small plants could be utilised, the problem was one of organising and mobilising their capacity to the best advantage. (29)

Thus, as the problems changed, there have been corresponding changes in the conception of medium and small scale industry itself. The approach to each new problem has added something to the concept which has now become a very complex one. An understanding of the way in which the concept developed in response to problems as they arose or were conceived to exist is indispensable in order to unravel this complexity and to grasp the significance of the idea of medium and small scale industry in Japanese economic and social thought.

What, then, is meant by the problem of medium and small scale industry? There appears to be a number of more or less distinct problems. According to Arisawa, "The so-called medium and small scale industry problem in the national economy is a population problem rather than a problem of industrial production and, as

(29) See below, Chapter IV.

such, is primarily a problem of small scale industry⁽³⁰⁾. According to Komiyama, on the other hand, "So far as its actual structure and conditions are concerned, the so-called medium and small scale industry problem should be presented as a problem of industrial production rather than as a problem of population or of labour⁽³¹⁾". Against this one finds statements like the following : "Medium and small scale industry, and particularly small scale industry (including cottage industry) which forms the bulk of it, is a form of production by which workers compete with the machine system of large scale industry⁽³²⁾ using as their weapon nothing but bad working conditions."

If the development of the idea of medium and small scale industry is properly understood, these statements should appear complementary rather than mutually exclusive. The social, population, labour and production problems, while having each its own individual emphasis, may be regarded as aspects of a single central problem - the problem of the adjustment of basic elements in the native Japanese economy to a situation in which that economy is controlled by highly developed industrial and financial forms and ideas imported from the West.

(30) Arisawa Hiromi, "Nihon Kogyo Tosei Ron" (The Control of Industry in Japan), Tokyo.

(31) Komiyama, op. cit. p. 5.

(32) Takahashi, op. cit. p. 48.

By the process described in this section, the concept of the "medium and small scale industry problem" has come to be an expression for the anomalies of economic organisation which result from the existence in the Japanese economy of a number of mutually incompatible factors of a fundamental kind. The essential meaning of medium and small scale industry, in all its variety, must be understood as the embodiment or manifestation of basic inconsistencies in the economic structure of Japan. This is what links the vast and heterogeneous population of medium and small enterprises into a single category. It is also the reason why the problem is such a fundamental one and why its solution is so difficult and yet so vital.

(v) The place of medium and small scale industry in the Japanese economy

It should now be apparent why the study of medium and small scale industry and its problems is so valuable as an approach to the analysis of the Japanese economy as a whole. Since medium and small scale industry is, as it were, the focus of fundamental problems of economic organisation it may be taken as a point of departure for an investigation of those underlying

structural inconsistencies without an understanding of which the Japanese economy remains something of a puzzle.

The recognition of medium and small scale industry as a special feature of Japan's economic development goes some way also towards making modern Japanese economic history more intelligible. The changes in small scale production over the last eighty years have been just as far-reaching, if not so spectacular as the introduction of large scale western industry. It is scarcely too much to say that without the rapid development of small scale native industry the programme of westernisation could not have been carried through at all. From the beginning it was ^{largely} the increase in native production which ^{provided the} ~~financed~~ ^{expansion of} industrialisation on the western pattern, and it is still the existence of small scale producers prepared to work for a very small return which makes large scale enterprise profitable.

Since medium and small scale industry understood in this way focuses attention on important aspects of Japanese economic development and organisation, the object of this study, of which it forms the central theme, is not so much to investigate small business for its own sake, but to indicate a way of approach to the analysis of the Japanese economy in general. It is the difference in the economic development of Japan from that of the

older industrial countries of the West which makes such an approach useful in Japan's case whereas it would hardly be relevant in the case, for example, of the United States. The difference in the nature of the medium and small scale industry problems in the two countries is so marked that it is doubtful whether the lessons of Japanese experience could usefully be applied to an advanced industrial economy or vice versa. On the other hand, it is quite likely that Japan's experience can, if approached in the right way, be of considerable value in planning the industrial development of so-called backward countries, particularly those of South-East Asia.

To sum up, the study of medium and small scale industry in Japan is only distantly related to the study of small business in an advanced capitalist economy. It is hoped, however, that it can be of considerable value in the study of the development and present structure of the Japanese economy itself. Moreover, since the study of medium and small scale industry in Japan's economic development focuses attention on problems of adjustment to the introduction of modern industrial techniques in an economy in which capitalist organisation is still in an elementary stage, it can possibly provide some guidance for countries which, if they are to develop along industrial lines at all, may be expected to some extent to encounter similar difficulties.

The main body of this book starts with an historical discussion of some of the problems of industrialisation in Japan as they appear in the development of medium and small scale industry. This is followed by a chapter describing the main forms of small business organisation which have been evolved in Japan. Chapter IV is concerned with the position of medium and small scale industry during and since the Pacific War. The concluding chapter is an attempt to analyse the economic basis of medium and small scale industry in the Japanese economy.

Chapter IIThe Evolution of Japanese Medium
and Small Scale Industry

It has already been suggested that the continuing problem of medium and small scale industry in Japan is symptomatic of basic structural maladjustments connected with the peculiar course of Japan's modern industrial development. The origins of the problem are therefore to be sought in Japan's economic development itself, and are closely connected with the process of industrialisation of a predominantly peasant economy.

This process generates two distinct, though interconnected problems. The first is the financial and technical problem of the actual introduction of western-type industry. Plans for the economic development of under-developed countries have recently focused a good deal of attention on this question. The finance of industrialisation, the maintenance of adequate and balanced rates of saving and investment, criteria for the selection of development projects and problems of labour supply have rightly become subjects of close study. ⁽¹⁾

(1) See particularly the work of Harrod and Domar analysing the process of economic development.

There is, however, another problem associated with the industrialisation of a "backward" economy. This is the problem of ensuring that the process of industrialisation does not affect the existing economy in such a way as to make its adjustment to the fact of industrialisation unduly difficult. Unless this problem of the adjustment of the native economy to the existence of an industrial sector in its midst is faced at an early stage, serious and enduring social and economic problems are liable to arise.

Because Western study of Japan's industrial development has been concerned primarily with the development of modern industry itself and only secondarily with long period effects on the rest of the economy, Japan is generally regarded as an outstandingly successful example of industrialisation. Japan has indeed been successful in solving the former of our two problems of economic development. She has, however, been very far from successful in solving the latter. It is suggested that the persistence and intensity of the economic and social maladjustments and inconsistencies collectively known as the problem of medium and small scale industry are a measure of Japan's failure squarely to face the problem of adaptation of the economy as a whole to the rapid growth of a Western-type industrial sector.

Japan's problem of medium and small scale industry is thus not only a static problem of economic structure, but also a dynamic problem of economic development. The introduction of comparatively large scale capitalist enterprise modelled on western patterns into an economy still in a stage characterised by household handcraft production and the consequent emergence of a "dual" economy form the background to the problem. The two sectors of the economy - western mechanised industry on the one hand, and small scale, predominantly household, native production on the other - have, at first, few points of contact. As they come into closer contact, the strains and anomalies due to their co-existence become increasingly apparent. With the eventual domination of the economy by western industry in the form of large concentrations of industrial and financial power, the problem of reconciling native production to the new state of affairs becomes acute. The formation of a controlled economy in the 1930's is seen partly as a policy of recovery from the depression, but partly as a rather unsuccessful attempt to effect the reconciliation and integration of the two spheres of the "dual" economy by authoritarian means.

The discussion of this process will be treated in four stages. The first describes the economic environment into which western industry was introduced in the

last quarter of the nineteenth century. The second consists of Japan's so-called "Industrial Revolution" itself, although that term must be understood as having only the loosest connection with the "Industrial Revolution" as it occurred in England. This is followed by a period of what is rather euphemistically called "Rationalisation", beginning with the post-war financial panic of 1920 and extending through a series of crises to the great depression of 1930. The fourth disastrous stage by which Japan sought to resolve the difficulties consequent upon the hasty introduction of Western capitalism and to find a way out of the impasse of the early 1930's starts with the formation of the "quasi-war economy" beginning in 1930-31, culminates in the Pacific War and ends with Japan's final defeat.

This chapter deals with the first three of these phases. The experiences of medium and small scale industry under the war economy and in the post-war period are described separately in Chapter IV.

(i) Industrial development before the introduction of Western industry

The emergence of a problem of medium and small scale industry as such requires, in the first place, the existence of both large scale and medium and small scale industry. An historical survey of the problems

of their interaction must start with a preliminary discussion of how and when each developed. Large scale industry (which may here be equated to Western industry) is clearly a product of the programme of importation of Western technique known as the Japanese Industrial Revolution. The origins of small scale industry, however, must be sought in earlier times. Industrial activity on a small scale can naturally be found at a very early date, but it will be sufficient for our purpose to describe the state and trend of industrial development at the time when the whole course of that development was altered by the introduction of Western industrial methods.

Since the seventeenth century, the political organisation of the country had become crystallised into a feudal system of government with the Tokugawa family at its head. Society was more or less rigidly divided into lords, samurai, peasants, artisans and merchants in that order. The material basis of this feudal society was a subsistence agriculture economy which it was the policy of the feudal government to preserve. For this purpose the sale of land was forbidden and restrictions were placed on the mortgage and division of land holdings. Change of residence and of employment were restricted and the type of crops which might be planted was closely regulated. Practically the whole of the production above what was required to support the peasantry at a very low

standard of living was taxed in one way or another and formed the income of the governing class. The interest of the governing class therefore lay in the increase of agricultural productivity and productivity did increase throughout the eighteenth century. The increase of a saleable agricultural surplus not only of rice (at that time the main form of feudal income and measure of wealth) but also of other products of agriculture and rural cottage industry, coupled with the growth of sources of demand in the rapidly growing cities, which in the nature of things could not be satisfied by subsistence production, led to the gradual extension of commerce. As money became more important, the disposition of the commodity incomes of the large fiefs came to be too complicated a business to be handled by a feudal household and was entrusted to specialised merchants. The custom grew up of feudal lords holding their incomes of rice and local products in warehouses in Osaka or Edo (modern Tokyo), which thus became large commercial and financial centres. Some local products such as wax, sugar, paper and indigo were handled by the Twenty-four Merchant Guilds of Osaka or the Ten Merchant Guilds of Edo and had a national market as early as the eighteenth century.

(2) Nijushi-kumi Tonya.

(3) To-kumi Tonya.

the pressure of increasing financial stringency, (6) actively encouraged the production of commercial crops. The working up of these products was at first carried on by the peasants themselves as a by-employment, and paper making, silk reeling and cotton spinning and weaving were very closely connected with agriculture, the peasants working up their own crops and selling the surplus. Later, as the dissolution of the peasantry progressed, and as markets widened and certain areas became more and more specialised in particular crops, some peasant industry came to use raw materials produced elsewhere, and to depend on merchants for access to markets both for raw materials and for products.

(5) Continued.

(Types of Farming in the Tokugawa Period), Tokyo, 1941, seem reasonable enough. On this point see also Furushima Toshio, "Nihon Hoken Nogyo Shi" (A History of Japanese Feudal Agriculture), Tokyo, 1941, and, particularly, Kajinishi Mitsuhaya, "Nihon ni okeru Sangyo Shihon no Keisei" (The Formation of Industrial Capital in Japan), Tokyo, 1949, pp. 18-44.

- (6) Particularly the "Four trees and three plants" (Shiboku Sanso), viz., mulberry, tea, paper mulberry and lacquer; dyer's saffron, indigo and hemp. The cultivation of the wax plant, sugar cane, tobacco and cotton was also encouraged.

This process is well illustrated in the case of the cotton industry. Cotton growing had become localised in the district around Osaka at an early stage and by the middle of the eighteenth century Osaka was already a large entrepot for cotton and cotton goods, the importance of which can be gauged from the following table of the amounts of cotton entering Osaka in ⁽⁷⁾1736.

Table 5

Type	(8) Quantity
Plain cotton fabric	1,178,391 <u>tan</u>
Striped cotton fabric	32,763 <u>"</u>
Cotton yarn	52,096,700 <u>momme</u>
Ginned cotton	48,586,400 <u>"</u>
Raw cotton	1,603,878 <u>kin</u>

In 1730, 14 million yards of cotton textiles were ⁽⁹⁾exported from Osaka to Edo. The important cotton weaving district of ~~Waizumi~~ ^{Taizumi} imported most of its yarn and ginned

(7) These figures are taken from Takahashi Kamekichi "Tokugawa Hoken Keisai no Kenkyu" (A Study of the Tokugawa Feudal Economy), p. 312.

(8) 1 tan = approximately 10 square yards
 1,000 momme = 8.267 lbs.
 1 kin = 1.322 lbs.

(9) Takahashi, op. cit. p. 316.

cotton from Osaka where the finished textiles were again
 (10) sold. In the nineteenth century, although the collection and distribution of cotton from one process of production to the next was carried on by small local merchants, often agents of large scale Osaka cotton merchants, these merchants neither took part in nor exercised control over the process of production itself. The cotton industry was thus carried on by independent peasant household producers until the use first of imported cotton yarn (from 1865) and later of Japanese yarn spun by imported machinery from imported (mainly Indian) cotton caused a sharp decline in the agricultural income of the peasants
 (11) and increased their dependence on merchants. The peasants in this area did not, however, become entirely dependent on commercial capital until about 1890 when the intro-
 (12) duction of a new type of loom which they could not afford to buy for themselves resulted in their becoming practically wage labourers working on looms rented to them by the merchants. This development, however, properly belongs to the next period.

(10) Takahashi, op. cit. p. 314.

(11) In the technical language of the time, the "Cotton Exchange System" (Men-kae Seido) gave place to the "Reeled Yarn Exchange System" (Kase-ito Kokan Seido).

(12) The Taiko loom, invented in 1888.

Thus, when Japan began to import Western industrial technique in the second half of the nineteenth century, the cotton industry was still carried on by peasants in their own cottages as an adjunct to agriculture. Although dependent on tonya of various kinds for access to markets they were not yet wage labourers. Neither were the tonya industrial capitalists, but commercial operators, often local landlords or money-lenders, or both. The form of production and its subsequent development were largely conditioned by the feudal peasant nature of the labour and the commercial - not industrial - nature of the capital involved. (13) Apart from ginning, which appears to

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- (13) Okura Nagatsune, writing in 1833, described the organisation of the cotton industry as follows :
 "Firstly, in the five provinces of Kinai (roughly the district around Osaka) there are people called Wata-nakagai in each village who buy up the cotton in its raw state from the growers. Then there are Kuriya (cotton ginners) who take over the cotton and employ a large number of people to remove the seeds with ginning implements. The ginned cotton is sold to a tonya who sells it to merchants from various provinces who handle transport. There are transport charges by sea or land. The buyers in the provinces sell it to the shops who get it softened (wata-uchi) and the fibres straightened (shino-maki)..... There are people who do nothing but this softening all the year round. This is spun into thread and made into hanks (kase-ito). The hanks of yarn are sold to an intermediary merchant (naka-gai) who sells the yarn to the various weavers. If striped cotton is to be woven the yarn is put out to a dyer before weaving. There are also merchants who go around buying up cloth from the weavers to sell to a tonya, or plain white cotton cloth is bought up by a "buyer" (shi-ire-ya)

/who has it

have reached the stage of capitalist controlled cottage wage labour, the production of cotton was still a peasant industry.

Silk weaving was a little further advanced in organisation. In Kiriu, originally a rather poor agricultural district, silk weaving was carried on by peasants who, though still working in their own homes, had by the middle of the nineteenth century become to all intents and purposes wage labourers. Since silk is not suitable for peasant consumption, its production naturally took on a commercial aspect almost from the start. Capital was provided by rich farmers, money-lenders or shopkeepers of the locality who became hata-ya (master weavers).⁽¹⁴⁾ These hata-ya bought silk yarn from the yarn merchants and put it out to be woven by peasants in their own homes⁽¹⁵⁾ for piece work wages. Sometimes the hata-ya actually

who has it dyed, patterned (in shibori) etc. and sells it to the drapers' shops. The whole process of producing cotton cloth consists of fourteen or fifteen stages creating a great amount of employment and providing a subsistence for many families (of peasants). There is no herb more miraculous than cotton." Mempo Yomu (Treatise on Cotton), Nihon Kagaku Koten Zensho (Collected Documents on Japanese Science), Vol. 11, p. 260.

(14) Ito-naka-gai.

(15) This is known as the "Chin-hata" or "Wage weaving" system.

(16)
 owned the looms which he rented to the peasant weavers.
 The finished cloth was sold by the hata-ya to a cloth
 (17)
 merchant. The hata-ya himself usually operated one or
 two looms, but, apart from one or two exceptional cases,
 production did not reach the scale of "manufacture".

In contrast to weaving, silk reeling was,
 (18)
 at the time when Western reeling machines were introduced,
 (19)
 rapidly approaching the manufacture stage. In Shinshu,
 for example, local capitalists, again mainly prosperous
 farmers, introduced the industry by inviting skilled silk
 reelers from the province of Hizen to teach the trade to
 (20)
 the wives and daughters of the local peasants. The
 equipment was usually owned by the capitalist but operated
 (21)
 by the peasants in their own homes on a wage basis. This
 cottage wage labour production was usual until the 1860's
 (22)
 when the introduction of a new type of reeler led to the

(16) This is the "De-bata" or "hired loom" system, although
 the terms "Chin-hata" and "De-bata" are now almost
 interchangeable.

(17) Kinu-naka-gai.

(18) About 1870-80.

(19) Roughly modern Gumma and Nagano prefectures.

(20) For a description of the pre-Meiji silk reeling
 industry see Kajinishi, op. cit. pp. 174-186.

(21) Under what was known as the "De-kama" system.

(22) The Joshu Zakuri Reeler.

establishment of a number of manufacturies employing from ten to twenty girl workers. Although the Masuzawa family introduced a number of locally made twenty-four reel power reelers in the 1860's, manufacture in the technical sense did not become the rule until the introduction of Western machinery.

The textile industry was by no means the only industrial occupation of the Japanese peasant before the Restoration. An important and typical employment of (23) peasants, artisans and sometimes even of the lesser gentry was the making of the lacquer ware for which Japan is famous. Originally carried on by artisans in the capital under the patronage of the imperial court and the nobility, the lacquer industry had by the early nineteenth century split into two distinct branches. On the one hand were highly skilled craftsmen working to order under the patronage of high feudal dignitaries, while on the other was a largely peasant industry producing commercially for a growing plebeian demand. The latter industry was (24) strongly localised, sometimes, as at Aizu, deliberately fostered by the feudal ruler as a commercial export for

(23) See Isobe Kiichi, "Nihon Shikki Kogyo Ron" (The Japanese Lacquer Industry), Tokyo, 1946; p. 108. The third chapter of this exhaustive study of the Japanese lacquer industry deals with the history of the industry.

(24) Modern Wakamatsu.

nature of the labour (poor peasants more or less bound to the land and forced to engage in industrial by-employment to eke out their existence) and the commercial nature of the capital involved (capitalist landlords and money-lenders) largely determined the forms of industrial organisation. Tonya system cottage industry predominated and was tending to develop, not directly into manufacture, but into cottage wage labour controlled by commercial capital. Although these cottage workers became, in fact, employees of the commercial capitalist (hata-ya or tonya) the idea seems to have persisted that the responsibility for their livelihood remained with their peasant families. Perhaps for this reason it required the processes of the Meiji Restoration to clear the way for the establishment of manufacture, a development which belongs to the 1880's and '90's. Indeed, when manufacture does come it appears most often as cottage industry on an increased scale, still dependent on commercial capital, and only rarely as the application of industrial capital to "free" labour and "free" means of production. Moreover, the fact that the formation of manufacture in Japan coincides with the introduction of industry based on Western machinery and technique inhibited its development into modern factory industry, and so placed the great majority of native industry irrevocably in the dependent category of medium and small scale industry.

(ii) Medium and small scale industry in Japan's industrial revolution

The previous section gave a brief description of the state of Japanese industry immediately before the introduction of western industry. This background is important since the course of industrialisation and in particular, its effects on the general economy of a "backward" country depend to a very large extent on the stage of economic and industrial development reached before the beginning of the process. In this connection the fact that Japanese industry was still in the stage of cottage industry controlled by commercial capital, and that manufacture and the formation of industrial as opposed to commercial capital had scarcely appeared, must be regarded as crucial. This section will deal firstly with the process of industrialisation itself (i.e., with the institutional changes necessary for development, with the financing of industrialisation, and with the actual process of introducing western techniques); secondly, with the reaction of the native economy (i.e., the development of native industry, government policy towards native industry); and finally, at the end of the industrial revolution period, with the emergence and implications of a "dual" economy dominated by western industry.

The institutional changes associated with
 (26)
 the restoration of imperial rule were of two types corresponding to the two main aims of the Meiji government, namely the unification of the country and the modernisation of industry and commerce. Very often, however, measures designed to promote national unification had far-reaching economic effects. The abolition of the clan fiefs and the reorganisation of local government in prefectures, for example, although designed to promote the centralisation of authority, resulted in great changes in inter-regional trade. More important, in view of the later growth of large scale finance capital, was the fact that with the abolition of the feudal clans, their incomes and debts were taken over by the central government, and the great merchants who had acted as brokers for the clans in Osaka and Edo found themselves almost automatically in the position of large scale creditors of the central government. The removal of all internal tolls and restrictions on the free movement of goods in 1869, although also a unification measure, had obvious effects on commerce. The same might be said of the Imperial Rescript on Education of 1872 to which Japan owes her system of universal education.

In the more narrowly economic field, a number of measures paved the way for the modernisation of the

(26) The restoration legally dates from the Shogun's proclamation (Taisei Hoken) of 14th October, 1867, handing back the administration to the emperor.

economy. In 1868, guild privileges were abolished and markets were made free to all. Lords and feudal retainers who, under the feudal system, had been forbidden to engage in what were considered unworthy occupations, were in 1871 made free to engage in commerce, agriculture or industry. From 1872 farmers also were permitted to engage in commerce and from 1873 were free to sell their produce (including staple food crops) in whatever way they wished.

The growth of commercial agriculture was hastened by the establishment of a national system of land tax between 1873 and 1881. The new tax, payable by the landowner and not, as formerly, by the occupier, was roughly as heavy as the old feudal taxes (about 34 per cent of the product) and was payable in cash. This requirement greatly hastened the spread of a monetary economy and of commercial agriculture, and made it even more necessary than before for peasants to engage in some industrial by-employment which would yield a cash income. Peasants who had previously been interested only in the quality of the harvest were now vitally affected by changes in the price of rice. These changed conditions hit the peasants very hard and, while on the one hand stimulating the development of merchant landlords and usurers, on the other hand hastened the dispersal of the peasant class and made their labour abundantly

plentiful for pursuits other than agriculture. The fall in the price of rice consequent on the financial retrenchment of 1882, for example, was a particularly hard blow to the peasants. Between 1883 and 1890 367,774 peasants lost land valued at almost 5,000,000 yen (27) for non-payment of taxes totalling only 114,000 yen. In the two years 1884 to 1886 alone, land valued at 37,500,000 yen is said to have been lost by peasants (28) through foreclosures. As a result of this sort of expropriation, commercial landlord and tenant relationships became the rule and the rural population became divided into poor tenants, small-holders and labourers on the one hand, and wealthy landowners and money lenders on the other. This development should be regarded as a speeding up, due to institutional changes, of a process which had been going on gradually for some time, or alternatively, perhaps, the institutional changes reflected an established trend.

(27) "Nihon Nomin no Hihei oyobi sono Kyusai Saku" (The Impoverishment of the Japanese Peasants and Measures for their Relief) (Nihon Sangyo Shiryo Taikai, Vol. 2, pp. 424-5).

(28) Kajinishi et al., "Nihon ni okeru Shihon Shugi no Hattatsu" (The Development of Capitalism in Japan), Tokyo, 1951; Vol. I, p.21.

As a result of this process, landowners became capitalists, roughly in the period from 1868 to 1890. At the same time, the pre-restoration military aristocracy, the lords and samurai who had been drawing stipends in rice for their (often nominal) feudal services, obtained from the government, as part of the restoration settlement, sums of money as compensation for the loss of their feudal revenues. These capitalised stipends usually took the form of government bonds. The more important dignitaries who received comparatively large sums, were encouraged to use these bonds to found banks, and a considerable amount of banking capital was formed in this way. Most of the lower samurai sold their bonds at a discount to money lenders, in whose hands large accumulations of them became concentrated. Primitive accumulation of capital and the process of changing a feudal

(29) In all, the government paid out about 226,000,000 yen as compensation for loss of feudal incomes. The money was raised as follows :

"New" Bonds	1872	12,422,000 yen
"Old" Bonds	1872	10,972,000 yen
7% London loan	1873	11,712,000 yen
Capitalised Stipend Bonds	1874-6	16,565,000 yen
Money Stipend Bonds	1879	173,902,000 yen
Old Shrine Stipend Bonds	1880	334,000 yen

(See Okazaki and Tsuchiya "Nihon Shihon Shugi Hattatsu Shi Gaiyo" (An Introduction to the History of the Development of Japanese Capitalism), Tokyo 1937; pp. 224-5.)

society into a capitalist society was thus more or less accomplished by government action. With the reform of the currency in 1881, the setting up of a central bank (the Bank of Japan) in 1882 and the creation of a modern credit system with convertible currency, the basis was laid for modern capitalist development. Nevertheless the dissolution of the old classes was far from complete and, in particular, private industrial capital was still practically non-existent in the 1880's.

At all events, by the 1880's or '90's a considerable, if scattered, accumulation of commercial and financial capital had taken place and a correspondingly large body of redundant rural population had been formed. The population could engage freely in any pursuit and could move freely from one place to another. Although many feudal practices and relationships lingered on, some at least of the conditions for industrial development were provided by the reforms of the early Meiji Era. (30)

The actual process by which the Meiji government set about introducing western industry is fairly well known in the English-speaking world and need

(30) The Meiji Era denotes the reign of the Emperor Meiji, 1868-1911.

(31)

not be described in detail here. That industrialisation had, in the first instance, to be undertaken by the government was probably inevitable in view of the conditions of the time. Private industrial capital was practically non-existent. Because native industry was still in the stage of peasant cottage industry, the formation of industrial capital associated with the stage of manufacture had not yet taken place. What truly industrial investment there had been, had been made by the Shogunate and the feudal clans. The Meiji government, as their successor found itself in possession of almost all the industrial investment of the country. The arsenals, shipbuilding yards and mining enterprises acquired in this way formed a basis for further development of heavy industry.

(31) G.C. Allen, "A Short Economic History of Modern Japan", London, 1946, Chapter II, contains what is perhaps the best short account in English.

Government enterprise was by no means confined to industries of direct military importance. In accordance with the slogan "National prosperity and military strength" ⁽³²⁾ the government entered the field of light industry also. ⁽³³⁾ The Department of Industry, set up in October 1870, dealt with all government industrial enterprises not of a specifically military character and managed (apart from railways, telegraphs, mining, cement and tile works, steel works, shipyards and engineering shops) spinning mills, weaving sheds and a brewery. The government not only set up model factories of its own, but also imported machinery which it sold to private operators on easy terms.

(32) Fukoku Kyohei. Takahashi in "Nihon Shihon Shugi Hattatsu Shi" (A History of the Development of Japanese Capitalism), p. 109, considers this a feudal idea and calls the government policy of 1868-80 the "Period of feudalistic protection and intervention", in contrast to a period of "Laissez faire" from 1881 to the Sino-Japanese War and a period of "Capitalistic protection" from the Sino-Japanese War on. Certainly the government's industrial activity in the early period was not activated by capitalist principles.

(33) Kobusho. This department handled the original establishment and management of industrial undertakings. It was abolished in 1885 when most of its enterprises had been sold off, and its place was taken by the Noshomusho established in 1881.

The government not only owned and operated over seventy industrial undertakings, but also gave very considerable financial assistance to private industrial development. A contemporary observer noted : "We find that every company or manufactory deserving of notice in any way has been furnished with capital by the Government or has been endowed with special privileges by the same power."⁽³⁴⁾ The early history of the Mitsubishi firm furnishes a good example of the extent of this government aid. The founder of this firm, an ex-samurai by the name of Iwasaki Yataro was entrusted with the management of the sea transport used in the Formosan expedition of 1874 and, as a reward, was presented with thirteen ships used in the expedition, and was able to buy a number of other government-owned ships at a low price. In addition, the company received a yearly subsidy of 250,000 yen from 1875. For a short time the government appeared to favour a rival line which it had set up in 1883, but in 1885 the line was amalgamated with the Mitsubishi company to form the Nippon-Yusen Kaisha (N.Y.K.) under the control of Mitsubishi. The N.Y.K. then received a subsidy of 880,000 yen per year.

(34) "The Currency of Japan" (A Reprint of Articles and Reports : published by the Japan Gazette, 1882); p. 260.

Most of the industrial undertakings not specifically military in character were sold off to financial groups around the 1880's. The prices paid were far lower than the investment actually made by the government. Table 6 shows when and to whom these establishments were sold.⁽³⁵⁾

(35) There is some uncertainty as to why the government sold off these undertakings.

Kajinishi et al. (see op. cit., Vol. I, p.35) suggest that the government had intended to sell them as soon as conditions had been created under which private enterprise would have some chance of success, and that it considered that such conditions had been created by November 1880 when the plan for selling off factories (Kojo Haraisage Gaisoku) was introduced. The present writer is inclined to link the sale of these factories with the general policy of financial retrenchment of the 1880's, of which Matsukata Masayoshi was the leading exponent. The low prices paid (in comparison with the government's investment) probably represented fairly accurately the rather low earning capacity of the enterprises capitalised at the rather high prevailing rates of interest.

See also E.H. Norman, "Japan's Emergence as a Modern State", New York, 1946; p. 131, where this question is discussed further.

(36)

Table 6 - Sale of Government Enterprises, 1874-1893

Name of Enterprise	Date Sold	Buyer
MINING		
Takashima Coal Mine	1874	Goto Shojiro (Transferred to Mitsubishi 1881)
Ashio Copper Mine	1877	Furukawa Ichibei
Naka Kosaka Silver Mine	1884	Sakamoto Yahachi
Kosaka Silver Mine	1884	Kuhara Shosaburo
Kamaishi Iron Mine	1885	Tanaka Chobei (part)
Innai Silver Mine	1885	Furukawa Ichibei
Okuzu and Magane Mines	1885	- - - -
Ani Copper Mine	1885	Furukawa Ichibei
Miike Coal Mine	1888	Sasaki Hachiro (Transferred to Mitsui 1889)
Sado Gold Mine } Ikuno Silver Mine }	1896	Mitsubishi
SHIPBUILDING		
Hyogo Shipyard	1886	Kawasaki Shozo
Nagasaki Shipyard	1887	Mitsubishi
CHEMICALS INDUSTRY		
Fukagawa Cement Works	1884	Asano
Shinagawa Glass Works	1885	Nishimura
TEXTILES		
Sakai Cotton Spinning Factory	1878	- - - -
Hiroshima Cotton Spinning Factory	1882	Hiroshima Prefecture
Aichi Cotton Spinning Factory	1886	Shinoda Naokata
Nitta Waste Silk Spinning Factory	1887	Mitsui
Tomicka Silk Spinning Factory	1893	Mitsui

(36) This list is taken from Kajinishi et al., op. cit.
Vol. I, pp. 35-7.



The government retained direct control of the munitions industry which, even after the Russo-Japanese War, included most of the engineering capacity of the country. The following table (which includes plants making ships, munitions, machinery and rolling stock) compares government and private enterprise in the engineering industry in 1907.

(37)

Table 7 - Government Enterprise in the Engineering Industry, 1907

	No. of Factories	No. of Workers	Prime Mover Horsepower
Government Factories	41	83,482	63,929
Civil Factories	703	58,511	25,000
TOTAL	744	141,993	88,929

The formation of industrial capital in the late nineteenth century was thus almost entirely carried out by the government, or with very considerable government assistance. This was unavoidable, since the establishment of modern industry in the backward economic

(37) This table is taken from "Meiji Kogyo Shi" (The Industrial History of the Meiji Period) Kikai Hen Chigaku Hen; p. 5.

conditions of the time was a task which could hardly be expected to attract private capital from the start. In carrying out its policy of "National prosperity and military strength", the government was not prepared to wait for conditions to arise in which the formation of private industrial capital could take place. What little industrial capital had been formed in Japan before the Meiji restoration was "under the pressure of state capital from above, either forced to dissolve or was prevented from developing fully, much of it remaining (38) as so-called medium and small scale industry".

Since this chapter is not intended to be an economic history of modern Japan, the course of Japan's industrial revolution has only been very briefly (39) sketched. The present study is concerned with the process of industrialisation only insofar as it created a problem of adjustment for the native Japanese economy, and resulted in an economic structure characterised by the problem of medium and small business.

(38) Kajinishi et al., op. cit. p. 34.

(39) For a fuller account the reader is urged to consult the works of Professor G.C. Allen and Dr. E.H. Norman already cited.

What was the effect of the introduction of Western industry on the economy as a whole? Since (40) Japan was a predominantly agricultural country, mention must be made of changes in agriculture. The development of agriculture in this period is of particular relevance to this study, because the emergence of a large body of surplus rural population living at a low standard of subsistence is, as we have already seen, a factor of primary importance in the problem of medium and small scale industry. The commercialisation of agriculture did not lead, in Japan, to large scale commercial

(40) The proportion of households engaged in agriculture was as follows :-

1873	79%
1887	71
1891	70

(Hirano Yoshitaro, "Nihon Shihon Shugi Shakai no Kiko" (The Structure of Japanese Capitalist Society), Tokyo 1934; p. 15)

The proportion of the population supported by agriculture was 78% in 1873 and 66% in 1888.

(Ono Takeo, "Noson Shi" (A History of Rural Villages), Tokyo 1941; p.305).

farming and the widespread use of agricultural wage labour. On the contrary, medium small farms became ⁽⁴¹⁾ the rule in this period. This was due partly to the fact that large landowners could obtain a greater net return by letting land in small lots to tenants who employed only family labour and who, because of lack of other opportunities of earning a livelihood, were prepared to pay a rent as high as half of the crop in return for a very meagre, if fairly secure, standard of subsistence. Small scale tenant farming, particularly of rice land, increased considerably between 1873 and 1892 as Table 8 shows.

(42)

Table 8 - Proportion of tenant farming by type of land

Year	Paddy fields		Dry fields		Total	
	Owner Cultivated	Tenant Cultivated	Owner Cultivated	Tenant Cultivated	Owner Cultivated	Tenant Cultivated
1863	- %	- %	- %	- %	69%	31%
1873	59.8	40.2	69.3	31.7	63	37
1877	56.4	43.6	66.6	33.4	61	39
1882	50.0	50.0	65.7	34.3	60	40

(41) By 1912 about 52% of farms were of from one and a quarter acres to five acres (Kajinishi et al., op. cit. p. 79).

(42) Hirano Yoshitaro, op. cit. pp. 78-79.

Farmers with holdings of less than one and a quarter acres and tenant farmers cultivating even two or three acres could not support their (usually large) families by agriculture alone. Surplus rural population took the form, not of unemployed agricultural labour, but of families of farmers, generally tenant-farmers cultivating plots of land too small to yield a reasonable livelihood. The change from "feudal" to "commercial" agriculture and the modernisation of the economy in general thus did little to alleviate the hard lot of the peasant. Since most of the demand for industrial labour in the new "western" industries was filled by persons formerly of the craftsman or samurai classes, the initial industrialisation provided very little alternative occupation for peasants and a pool of underemployed, rather than unemployed, persons was formed.

If these peasants could not live by agriculture alone, some supplementary source of income had to be found. As we have seen, this was not provided by western industry. It was provided by developments in native industry. During the period when western industry was being introduced, native industry underwent considerable changes. With the opening of the country to foreign trade some native industries declined in importance while others grew. The use first of imported

cotton yarn and later of cotton yarn spun by modern spinning plants from imported raw cotton led to a sudden decline in the native cotton growing and spinning industry. This was counterbalanced by a great rise in silk production both for home consumption and for export.

At the same time as modern industries were being introduced on the latest western patterns, native industry was entering the stage of manufacture, but manufacture of a peculiar kind. Manufacture became common in Japan in the 1880's and 1890's with the widening of markets and the introduction of more complicated equipment.

Markets widened in two ways. With the general development of specialisation and internal commerce and with the growth of urban populations, there was a widening of internal markets. More important to native industries was the growth of export markets. Since the introduction of western capitalist industry was, to a large extent, a policy of protecting the country's economic and political independence, the government was unwilling to risk that independence by incurring large foreign debts. The cost of importing industrial potential had therefore to be met by a corresponding increase in exports. For this purpose Japan's native industries were eminently suitable. Such traditional products as raw silk, textiles, ceramics, lacquer, tea and straw matting could be exported without much change

in technique or much new capital investment. It was the need to preserve a balance in foreign trade which first brought small scale industry (at that time thought of as "native industry") into the realm of government policy.

In his "Kogyo Iken" (Policy for the Encouragement of Industry) 1885 and "Shoken" (Observations) 1893, Maeda draw attention to the need for promoting exports of native products. Exhibitions and research stations were set up by the government, and producers' unions were formed to handle the inspection and marketing of exports. In 1885 the government started producers' co-operatives for the purpose on a regional basis. In 1898 the first national organisations for dealing with staple exports were established. By 1910 there were 770 such organisations, almost all handling exports of native products.

Development of markets, then, was one impetus towards the formation of manufacture. The other was the development of technique. In the field of cotton spinning, no doubt stimulated by the competition of imported yarn, the "Garabo" cotton spinner was invented in 1873. It appeared in the industrial exhibition of 1877 and was widely used, particularly in the old cotton district of Mikawa, in the 1880's and '90's. In the silk reeling industry the introduction

of the so-called "Agekae" reeler in 1880 made possible a greatly increased output and enabled the peasant industry to compete with the imported French and Italian filatures. In weaving, new and more complicated types of loom appeared. In the 1880's and '90's "Battan" and Jacquard looms came into common use in the old silk weaving districts of Kiriu, Ashikaga and elsewhere.

The widening of markets and technical developments in the general context of a developing commercial and capitalist economy led to a change from peasant cottage production controlled by Tonya to what may be called peasant manufacture. This change differed from the corresponding development in Europe in that it did not necessarily, or even usually involve the transfer from peasant labour to free labour directly employed by an industrialist. What is called "manufacture" in Japan was usually cottage industry on a larger scale. Dependence on the capitalist (Tonya) was increased by the necessity of working with machinery and often material supplied by him, but this dependence rarely reached the point of becoming a wage labourer in the factory of an industrial capitalist. One reason for this is to be found in the conditions of labour supply. For the same reasons that the large landowner found it more profitable to rent land in small lots to tenants at very high rents, than to farm it himself, the Tonya found that it paid him

better to rent capital equipment to peasant households and to have the work contracted for at piece rates than to employ full time labour and engage in production himself. In this way he could rely on effective piece rates being kept very low by the fierce competition of poor rural families anxious to obtain some supplement to their income, however small. This tendency was reinforced by the absence in Japan of the need to set up separate factories in order to take advantage of steam or water power. The use of power was introduced rather late in Japan, and when it did come, it usually took the form of electric motors, which can be used in a small home plant almost as well as in a separate factory building.

Two things are important about the development of native industry in the "Industrial Revolution" period - the peculiar way in which manufacture was formed and the fact that native industry reached the stage of manufacture at a time when western industry and the operations of finance capital were beginning to assert themselves as the driving force in the Japanese economy. (43)
The position is summed up by Kajinishi :-

(43) "Nihon ni okeru Sangyo Shihon no Keisei" (The Formation of Industrial Capital in Japan), pp. 267-8.

"Apart from rare examples in late Tokugawa times and a few in the early Meiji period, the formation of manufacture in Japan starts from around 1887. This contradicts the view sometimes put forward, which characterises late Tokugawa times as the age of manufacture. In late Tokugawa times, particularly if one considers the silk and cotton industries, in general one can discern no more than the formation of capitalist controlled cottage labour. The processes of the Meiji Restoration were essential if this was to develop into manufacture. This usually involved the existence of a peasant class expropriated by the drastic processes of primitive accumulation. Thus manufacture emerged, sometimes gradually, sometimes rapidly, roughly around 1887. Since this was the period in which machine spinning and other imported machine industries were being established, it is clear that the emergence of manufacture did not result in the formation of an 'Age of Manufacture' in the strict classical sense. Where large scale industry had thus already developed, manufacture found its path of development cut off and had to submit for a long time to large scale industry. In this way it took the form of so-called medium and small

scale industry - the characteristic feature of Japanese capitalism."

These are the aspects of Japan's industrial revolution which are relevant to our study of "the characteristic feature of Japanese capitalism", namely, the way in which manufacture developed and the fact that it developed at the same time as large scale western industry was being established. By 1914 (by which date the first phase of the industrial revolution is sometimes taken as being completed) a dual economy had come into being. The resultant conflicts did not become apparent until the next phase - the series of economic crises known in Japan as the period of rationalisation. The existence of a dual economy was nevertheless something new and important.

(iii) Medium and small scale industry in the modern economy

As we saw in the preceding section, the introduction of large-scale industry in Japan did not immediately raise the problem of small industry in any acute form. Japan's experience in this respect contrasts with that of Germany, where industrialisation very quickly raised the question of the future of small industry. Since the large scale industries introduced into Japan in this period were largely producing "military" or "western" products they

did not compete at all closely with native small scale industry which produced mainly traditionally "Japanese" products.

Although there is some discussion of the competition of large and small industry in the literature of the period, it is no more than an echo of the writings of the German historical school and can have had little relation to actual conditions in the Japanese economy.⁽⁴⁴⁾ On the whole, the period of the "Industrial Revolution", that is to say, of the introduction of western industrial techniques, was one of steady development for small scale native industry also, which, as we have seen, reached a highly developed form of manufacture in this period. This development tends to be overshadowed by the much more rapid and spectacular development of large scale western industry, but is, nevertheless, real and important.

This is not to say that small industry developed entirely undisturbed; but its problems were due far more to internal competition within its own ranks than to the competition of large scale western industry. The new technology did not so much replace the old as

(44) See Kamai, "Nihon Kogyo Shi" (Industrial History of Japan), Tokyo, 1936.

form an addition to it, and, as already mentioned, the old industries had still an important part to play in this period insofar as they provided the exports which paid for industrialisation.

By the end of this period of initial industrialisation, (that is, roughly around the first World War) the position had changed significantly. Small industry was still very important quantitatively, but was no longer the driving force in the economy. At the end of the Industrial Revolution period Japan was left with most of its productive capacity crowded at the two extremes of large concentrations of capital at the one end, and very small businesses at the other; and although the latter were numerically and in working population the vast majority, it was the former which took the lead in production and set the tone of the economy as a whole.

By the end of the first World War, although many vestiges of a pre-capitalist economy survived, they were largely superficial and secondary. Japan had developed a capitalist economy in the modern sense, firmly controlled by capitalist principles. At this point, the problem of small scale industry became a problem of the existence of small scale industry (already thought of as "backward") in a modern capitalist society, and it raised the question of whether there was a permanent place for small scale industry in further economic development.

A number of factors tended to make contemporary scholars answer this question in the negative. In the first place, there was the rather strong influence of foreign scholarship. All the work of the German historical school seemed to indicate that modern industrial capitalism was not a climate in which small scale industry (then thought of as hand and cottage industry) could flourish permanently. At the same time, Marshallian economic theory based on assumptions of perfect competition and mobility of resources seemed to indicate that firms, like the famous "trees of the forest", either grow or wither, and that, with few exceptions, small "backward" firms cannot compete permanently with large efficient businesses. In point of fact, neither conditions in Germany nor the assumptions of Neo-Classical economic theory corresponded in any but the vaguest way with actual conditions in Japan at the time. Their influence on Japanese thought was, however, no less important for that.

Another factor which made Japanese wonder whether small industry had not outlived its usefulness was the changing character of Japanese exports. Whereas the bulk of these had earlier been provided by small scale native industry, a good proportion of the great increase in exports during the war consisted of the products of

large scale western industry. This applied particularly to the demand of the Allies for war materials and other products of the engineering industry and to the growth of large scale cotton textile production for export. It was considered that as large industry became established it would provide at least sufficient exports to settle the import bill.

Finally, there was the growth in the scale of some small industries. The tremendous increases in demand during the war and the availability of electric power led to a rapid growth in the scale of operations. The spread of the use of electric power in particular, while it favoured small scale operations as such, on the other hand, set the lower limit to scale somewhat higher than that for purely hand production. More important, it enormously increased the possibilities of growth for small establishments. Whereas the gap between hand labour (or, as in the case of silk filatures, the water wheel) and steam power was almost too great to be bridged at all, the gap between a small electric motor and a larger electric motor could be bridged in easy stages. The following table shows how the use of power spread.

/Table 9

(45)

Table 9 - Percentage of Factories using Power by
Size of Factory

Year	Size of Factory by Number of Employees						Total
	5-10	10-15	15-30	5-30	30-50	50-100	
1909	14.4%		30.4%	20.9%	64.1%	78.2%	28.3%
1914	28.9		49.1	37.9	76.1	87.8	45.8
1919	46.2		65.1	54.5	85.7	92.8	61.3
1920	55.0		76.6	59.5	88.5	94.5	65.3
1929	75.0	83.0	88.9	78.8	92.7	96.8	81.5
1931	77.3	85.0	90.8	80.7	94.4	97.7	82.9
1933	79.9	87.4	91.2	83.1	95.1	97.7	85.1
1935	80.6	88.4	92.3	84.1	95.5	98.0	86.1
1936	81.4	89.2	92.5	84.9	95.5	98.0	86.8

From these figures it appears that factories employing over 50 persons (and to a lesser extent those employing 30-50 persons) were mechanised mainly in the period before the first World War. Factories of the 15-30 employees class introduced mechanical power during the war and small factories (5-15 employees) became mechanised in the post-war period. It is quite clear that whereas the pre-war mechanisation of the larger plants was based on steam power, the post-war mechanisation of the smaller factories was based on electricity. In 1909, for example, only 10.8% of all power used was electrical and this was

(45) Compiled by Professor Komiyama from the Factory Statistics of the Ministry of Agriculture and Commerce and the Ministry of Commerce and Industry. See Komiyama, op. cit., p. 13.

(46)
concentrated in large engineering works. Pre-war mechanisation in the smaller plants (5-15 employees) reflects the use of water power in the silk reeling industry. That the mechanisation of smaller plants after the war reflected the increased use of electricity is clear from the following table.

(47)
Table 10 - Use of Electric Power by Size of Factory

Size of Factory	Percentage using power		Electric power as percentage of total power used	
	1919	1929	1919	1929
5 - 10 employ- ees	46.1	74.9	58.1	84.6
10 - 30 "	65.0	86.1	59.9	86.7
30 - 50 "	85.7	93.2	56.3	87.2
50 - 100 "	92.8	96.8	59.9	96.2
100 - 500 "	97.2	99.0	56.3	95.0
500 -1000 "	100	99.7	65.1	93.8
Over 1000 "	99.4	100	56.1	91.5
Total	61.2	81.4	58.1	88.9

(46) See Kambayashi Teijiro, "Nihon Kogyo Hattatsu Shi Ron" (History of Japanese Industrial Development) Tokyo, 1948, Table 12, p. 103 and Table 14, p. 109. The source is the Ministry of Agriculture and Commerce Statistics, series 26, 1909.

(47) Based on the Factory Statistics for 1919 and 1929. Compare Kambayashi, op. cit., p. 174, Tables 43 and 44.

The question of the future of small scale industry in a capitalist economy was discussed at some length as early as 1917 at the annual meeting of the (48) Society for Social Policy. There seems to have been fairly general agreement that small scale industry would either grow in scale or eventually be competed out of existence. Medium scale industry (say, 50-150 employees) was regarded as already on the way up, as it were, and attention was concentrated on the small plants, mainly on cottage industry and urban by-employment. The problem was no longer one of "native" industry to be fostered as a means of earning foreign exchange. It was regarded as a social problem of relieving the worst features of small scale industry during a transitional period in which it would either grow or disappear. The emphasis was thus mainly on the social problems associated with small scale industry (particularly home industry, handwork and by-employment) - on sweated labour, female and child labour

(48) Shakai Seisaku Gakkai Nenji Taikai 1917. See Yamanaka, "Chusho Kogyo no Honshitsu to Tenkai" (The Nature and Development of Medium and Small Scale Industry) Chapter 5, Section 3.

and general conditions of work, rather than on small scale industry as a workable form of industrial organisation.

The problem of medium and small scale industry as a form of industrial organisation became explicit in the series of economic crises which followed the ending of the post-war boom and culminated in the world-wide depression of 1929-31.

In spite of the prophecies of Japanese economists and sociologists, small scale industry stubbornly refused either to disappear or to grow into modern large scale industry, but went off on a line of development of its own. By the time of the financial collapse of March 1920 the character of medium and small scale industry had changed considerably, and these changes became more pronounced throughout the troubled times of the 1920's. A large section had already lost the character of home industry and handwork and had entered the stage of factory production, albeit on a small scale.

Just as the stage of manufacture appeared in an unusual form, so the type of small factory production which emerged from it was of a type peculiar to Japan. As we can relate the stage of "Capitalist Cottage Industry" to the Early Tonya System, and the stage of "manufacture"

to the Old Tonya System of production, so we can relate small factory production to the New Tonya System and the (49) Sub-contracting System. Whereas in the West, manufacture did, in fact, either develop into independent industrial capitalist enterprise, or disappear, the development of factory production in Japan (outside of government-sponsored large scale western industry) was a strange sort of compromise.

Small factory production emerged in Japan through the mechanisation and increase in scale of small workshops generally under the control of commercial capitalists (or Tonya) but sometimes - particularly in the engineering industry - in the form of outworkers for a large factory. This growth took place mainly during and immediately after the first World War. This period was particularly favourable to such growth for a variety of reasons, the most obvious of which was the general very high level of demand both for home consumption and for export. Just as important, however, was the attitude of large scale industry to this great increase in demand. Established large scale enterprises regarded the increase as temporary and were unwilling to undertake a programme of capital investment large enough to cope with the rise

(49) See below, Chapter III.

in activity in their own sphere, let alone to enter fields of industry new to Japan, such as bicycles, sewing machines, electric globes, rubber products, knitted goods and various metal products for which a demand (both home and export) arose in Japan at this time. A large area was thus left open to those outside the charmed circle of large scale industry - namely to small and medium factory producers.

The influence of electric power in this development of small business has already been mentioned. Another important factor of a permissive kind, which contributed to the growth in scale of some small scale industry, was the prosperity of the rural population. Since ease of entry is a feature of Japanese small business, the pressure of excess rural population normally means that an increase in demand is usually filled by an increase in the number of firms rather than by the growth of existing firms. The high prices of rice and raw silk (the two main cash crops) brought comparative prosperity to the rural population and tended to remove this pressure to some extent.

The stage of factory production which "native" (as opposed to "introduced") industry reached at this time had, as we have said, some peculiar features. What emerged were not small but sturdy and independent industrial

capitalists of the nineteenth century English type. No process of competition and innovation promoted some to the ranks of big business, while reducing others to bankruptcy and failure. Although the technique of production became that of the factory system, the form of industrial organisation retained many features of manufacture, and even of cottage industry and the putting out system. Just as Japanese manufacture remained under the control of the external commercial capitalist - the Tonya - so small factory industry was unable to free itself from this external control.

This external control took two main forms which will be described in greater detail in the following chapter. On the one hand, the unwillingness of large factories to increase their capacity and their preference for letting out to small factories that part of their orders which they could not fill from their own capacity has already been noted. This greatly increased the numbers of small factories (mainly unspecialised engineering workshops) which were dependent on large scale industrial capital for their successful operation. This form of industrial organisation we call the "Sub-contracting System" of small factory production.

On the other hand, those former outworkers of the Tonya who had now become the owners of small factories might have been expected to have become independent. Although they attempted to do so, few were able to stand on their own feet. In the process, however, the Tonya system underwent a considerable change. At the suggestion of the government, many of these small factories organised themselves into industrial associations (Kogyo Kumiai) under the law of 1925. These were co-operative unions with some elements of cartel-like control, but no powers of compulsion. Their main intention was to introduce some element of order and organisation in the export industries. The law setting up these associations expressly excluded all who were not engaged in actual production, with the intention of doing away with the Tonya. In this, however, it was not successful. The Tonya set up small factories of their own (usually for preliminary processes, packing, etc.) and thus became eligible for membership of the industrial associations which they soon came to control. It is this growth of the Tonya's outworkers into small mechanised factories and the participation of the Tonya themselves in the process of production which distinguished the New Tonya System from the Old Tonya System.

(50) See the next chapter.

Thus, the prophecies that small scale industry would either grow into large scale industry or disappear, have not been fulfilled. On the one hand, although a large part of Japanese native industry has now passed through the stage of manufacture and reached the stage of factory production, there has been very little development of independent industrial capital outside a numerically small group of large scale "western" undertakings. On the other hand, small scale industry has shown no noticeable tendency to disappear.

(51)

As late as 1935 a foreign observer declared :
 "In Japan the importance of small industries is declining. The number of small industries will diminish and they will finally disappear and be replaced by large undertakings where satisfactory conditions of labour prevail as a natural consequence of centralisation and mechanical progress." Why has this not happened? Maurette and the earlier Japanese scholars based their predictions on the experience of European countries. Clearly the lessons of this experience do not apply to Japan, nor, when the differences in the timing and circumstances of industrialisation are considered, is there any reason why they should

(51) Fernand Maurette, "Social Aspects of Industrial Development in Japan", I.L.O. 1935.

be expected to do so. Western methods of large scale factory production were introduced late into Japan, when they had already reached a high stage of development, the result of many decades, perhaps centuries, of slow growth. This advanced form of industrial organisation was introduced into an economy predominantly agrarian, in which almost all production was in the form of peasant cottage industry. This is the context in which the problem of Japanese medium and small scale industry has arisen.

The object of this chapter has been to throw light on the nature of medium and small scale industry and its place in the Japanese economy by reference to its origins and development. Its origins have been sought in the native Japanese economy, and its development has been shown to correspond with the development of the native economy itself. This development, although strongly influenced by the introduction of western large scale industry, is sharply separated from it. By the end of the first World War at the latest, the problem of the future of Japanese small scale industry was not how it could develop into modern independent enterprise after the classical model of English industrial development. In Japan, modern industry was already in existence and by that time had a firm grip of the country's industrial system. The problem for small scale industry was how to

fit itself into an industrial structure already dominated by a group of large scale industrial undertakings which themselves had no tradition of growth from any earlier form of industry in Japan. This is, perhaps, the basic difference between the position of medium and small scale industry in Japan and its position in, for example, England or America; and, in conjunction with differences in the supply of labour and capital, helps to explain many of the peculiarities of recent Japanese industrial development.

Since the object of this study is specifically medium and small scale industry, this account has avoided treating the modern economic development of Japan as the development of large scale western industry and the formation of large financial groups, in which small scale industry, for some rather obscure reason, perversely refuses to disappear. On the contrary, we have tried to explain the structure of Japanese industry in terms of the development of the main body of indigenous Japanese industry, vitally affected by the impact of western industry and subject to its increasing control, but nevertheless developing along lines of its own. We have seen this develop from production by peasants for their own use (and by artisans to order) into cottage production for a

market, under the direction and control of the early Tonya (landlords, money-lenders and merchants). We saw, roughly around the period in which western industry was being introduced, the emergence of manufacture under the "Old Tonya System" - still scattered in cottages and under the control of commercial capital, but with minute division of labour and a complicated organisation. Finally, we saw (while large scale industry was entering the stage of monopoly finance capitalism) the mechanisation of small scale industry and the emergence of medium and small factory production, still unable to free itself from dependence on outside capital - either commercial (the "New Tonya System") or industrial (the "Sub-contracting System") - and still preserving many features inherited from earlier stages of development. In the next chapter we shall see what forms medium and small scale industry has evolved in the process of adjusting itself to the modern industrial life of Japan.

Chapter IIIThe Anatomy of Medium and
Small Scale Industry

In the preceding chapter we discussed the nature of Japanese medium and small scale industry and its place in the Japanese economy by tracing its evolution from pre-Restoration times to the end of the 1920's. Although there have been structural changes in the Japanese economy since that time, the structure and organisation of medium and small scale industry have remained basically the same. Whereas the earlier development of small scale industry was treated as an integral part of Japanese economic development as a whole, its experiences under the war economy and in the post-war period seemed to require a somewhat different treatment and will, therefore, be described in a later chapter.

In this chapter we approach our problem from a different direction; namely, by studying the forms in which medium and small scale industry exists now, and in which it has existed more or less unchanged since the 1930's. Peculiarities of wartime organisation and post-war changes of detail are, for the sake of convenience, postponed to the following chapter.

The heterogeneity of medium and small scale industry and the need for classification were emphasised at the outset of this study and a scheme of classification was indicated, based on the degree and nature of dependence on outside capital. Medium and small industrial enterprises were divided into three main groups - those which are relatively independent of outside capital; those which are dependent on commercial capital; and those which are dependent on external industrial capital. The second group - those which owe their existence to their dependence on commercial capital - was further divided into the "Early Tonya System", the "Old Tonya System" and the "New Tonya System".

We have seen how and in what sort of economic environment each of these types of industrial organisation evolved. These different types of organisation and the way in which they work must now be described. This chapter will be, in fact, a description of actual conditions in Japanese small-scale industrial establishments and the way in which they work in the framework of the modern Japanese industrial system as a whole. In using statistical material in this context, one must inevitably deal with averages which may sometimes be misleading. In as many cases as possible, therefore,

actual examples of what may be regarded as typical cases are given wherever their inclusion can help to clarify an impression or to complete a picture.

(1) Independent forms of medium and small scale industry

The term "independent" as applied to medium and small scale industry may have either of two meanings. On the one hand, it may mean that an industry as a whole is carried on in small units independent of the competition of large scale industry. On the other hand, it may refer to the independence of a single firm from control by capital external to the firm itself.

Many examples may be found of independence in the former sense. The weaving of silk and artificial silk, some cotton, lacquer ware, cloisonné and animal and vegetable products are all industries organised on a small scale which, for various reasons, are not subject to the competition of large scale industry. Various factors may explain the absence of large scale competition. The nature of the raw material may make large scale operations difficult, for example, animal and vegetable products, the fishing industry and some other foodstuffs. Again, the nature of the demand for the products of an industry may limit the scale of production. For example, the limited nature of the demand for some high-grade

pottery or for such things as good quality Chinese-style writing brushes, makes mass production impossible. Extreme variety of demand, as in the case of silk textiles for Japanese dress, toys, household pottery and other articles of Japanese household use, makes large scale production impracticable. The same considerations apply where demand fluctuates widely over time, either seasonally - e.g., fans, calendars - or because of fluctuations in business conditions, as is the case in many small scale industries manufacturing special lines for export. Again, large scale production may be difficult because of the nature of the technique of production, which, as in the cases of damascene, cloisonné, bamboo and wooden products, makes mechanisation difficult. Moreover, since accumulated industrial capital in general is particularly limited in Japan and its marginal efficiency is very high, it tends to be employed first in those fields which, while otherwise suited to large scale production, also offer the highest returns to capital. Many industries which could be, and in more advanced countries often are, carried on on a large scale, do not offer returns large enough to tempt large scale capital in Japan. Large sectors of industry are thus left, for the time being at least, to medium and small scale industry, "independent" of direct competition from large scale capital.

If "independence" is taken in this sense most Japanese medium and small scale industry is independent, since it rarely competes directly with the products of large-scale industry. Even where both large and small firms exist in the same industry, direct competition is rare. Either the products of small producers are sufficiently different from those of the larger firms to make the markets for the two types of products almost completely separate; or, the smaller producers are complementary to the larger, as in sub-contracting. Where a genuine case of direct competition is found (the electric lamp industry is perhaps a good example), the co-existence of large and small firms in competition is generally based on the existence of two or more optimum scales of production. It must be emphasised, however, that such direct competition is rare.

Since the majority of small scale industry is independent in this sense, and since the existence or absence of direct competition is not always a good indication of the ability of small enterprises to stand on their own feet, we prefer to use some such terms as "competitive" and "non-competitive" to describe this relationship, and to use the term "independent" in its second sense, that is to say, with reference to the independence of a single firm from control by outside capital.

Dependence and independence in this sense are relative terms. No firm is completely independent of external forces, but this dependence may be more or less obvious. Small manufacturing firms which have direct access to markets both for materials and for products and can operate in those markets free from interference and repression, may be regarded as independent for our purpose. Few small firms enjoy this kind of independence in Japan. Those which do are of two main types. First, there are those small artisans who manufacture directly to the order of the consumer. In this category are tailors, seamstresses, some dyers, shoe-makers, visiting-card printers, a number of food trades, carpenters and various repair workshops. Small manufacturing establishments of this type are familiar to almost everyone and are by no means peculiar to Japan. In fact, this type of firm in Japan differs so little from similar firms in more familiar countries that it hardly requires detailed description here. The scale of operations is typically very small, usually one man assisted perhaps by some of his family and occasionally an apprentice. If an apprentice is employed, he very likely lives on the premises and is treated as one of the family. As a rule, very little capital is required, although in the case of a baker or a printer, capital may amount to a few hundred pounds. The typical establishment consists of a small shop with

the workshop behind it. Living quarters are either upstairs or in the rear of the premises. There is seldom any attempt to separate the accounts of the business from household accounts. There is very little opportunity for innovation and little prospect of growth. These small manufacturers working to the order of individual consumers exist in Japan for the same reasons as they exist in other countries. As in other countries, their numbers have declined with the development of ready-made goods. The smith and the tinker can no longer compete with the variety of goods offered by the retail ironmonger and, as elsewhere, the bespoke bootmaker finds increasing difficulty in competing with the retailer of ready-made shoes.

The second group of independent small manufacturers is of quite a different kind. These are firms which produce some kind of specialty for which the demand is limited and in which the independence of a particular firm is protected by a special position in the market. This special position may amount to a monopoly and may be based on the age and prestige of a firm or on the possession of patent rights or secret processes. For example, a certain firm makes Japanese-style tobacco pipes. This firm is of such age and prestige that its brand has become almost a synonym for the product. In addition, it is said to possess a trade secret which

enables it to produce a superior product. Another firm produces a certain type of pickle and because of the age and prestige of the firm and the wide reputation of its pickles, enjoys a special position. A rather different example of a firm enjoying the same kind of special position as a result of the possession of patent rights is provided by a medium-sized firm which specialises in communications equipment, in which field it holds a number of important patents. The medium-sized firm is thus able to remain independent, although the communications equipment industry as a whole is tightly controlled by a very small number of large concerns.

We have said that independent medium and small manufacturing establishments are rare, but it should be remembered that it is not so much a statement of fact as a judgment of how independent an enterprise must be to merit that description. Since it is dependence which is the important characteristic of medium and small scale industry in its relations with the economy as a whole, we have deliberately set the standard of independence rather high. The important fact is not that some small establishments are independent, and the important question is not whether there are somewhat fewer or somewhat more independent small firms. What is far more important for our study is the proposition that medium and small scale

industry as a whole occupies a dependent position in the Japanese economy. That the nature and degree of that dependence varies greatly will become clear from the following descriptions.

(ii) Dependence on commercial capital

(a) The Early Tonya System

Those forms of organisation under which medium and small scale industry is dependent on external commercial capital are known as the Tonya system. ⁽¹⁾ The essential feature of the Tonya system is that a commercial capitalist stands between the small producer and the market for his product and often between the producer and the market for materials as well. The degree of isolation of the producer from the market varies, and the control of the commercial capitalist, or Tonya, over the small producer may be reinforced by other factors, but essentially the dependence of the small producer is based on the Tonya's position between the producer and his markets.

Although there has been some tendency towards dependence on industrial rather than commercial capital

(1) See above, Chapter I.

over the last two decades, the majority of Japanese medium and small industry is still organised in some form of the Tonya system. The Tonya system may be conveniently divided into three types corresponding with the three stages of the development of "Japanese" industry. Corresponding to the early stage of peasant cottage production for a market is the "Early Tonya System". Corresponding to the stage of manufacture is the "Old Tonya System", and corresponding to the stage of small factory production is the "New Tonya System".

Since the early Tonya system has been mentioned in connection with the historical evolution of medium and small scale industry, and since something like it still survives here and there in the Japanese industrial economy, it should be described briefly here, although it is now quantitatively unimportant.

The early Tonya system is distinguished from later forms by the fact that production has not yet reached the stage of manufacture in the technical sense. Where it still exists, it is based on the part-time labour of peasants in their own cottages, and no outside labour is employed. The products are usually very simple and require no tools not available to the average farmer. Since the production processes are simple there is very little division of labour.

Under the Japanese system of agriculture, there is considerable seasonal fluctuation in the demand for agricultural labour. During most of the year only half of the agricultural labour is employed in farming, and in January there is practically no agricultural work at all. In May (the rice planting season), August and September (the harvest time), on the other hand, there is actually a shortage of agricultural labour. On the average, the agricultural population is employed for perhaps 185 days per year. Since agriculture does not usually yield a reasonable living to farming families, most engage in some by-employment in the intervals of agricultural work in order to supplement their cash income. This by-employment is still sometimes organised on the early Tonya system, much as it was in the eighteenth century.

The farming family produces some simple product, such as straw sandals, wooden implements, bamboo products or silk braid, or performs some labour intensive process, such as "tied and dyed" work (known as shibori). Materials are either agricultural products produced and worked up by the peasants themselves, or are provided by

(2) Dr. Nasu's estimate. See Takahashi Kamekichi, "Gendai Chusho Kogyo Ron" (The Theory of Modern Medium and small Scale industry) Tokyo, 1936; pp. 150-151. See also Nasu, "Land Utilisation in Japan", I.P.R. 1929.

the Tonya. The Tonya is probably a local merchant or perhaps a well-to-do local farmer who employs his stock of capital in organising this sort of local peasant industry. In either case, the Tonya takes no active part in the process of production. His activity is limited to the selling of the produce and (sometimes) the provision of materials. The Tonya pays the peasant workers by piece rates. His control over the peasant producers is based on his special position as the only link between the producers and the markets for the products and sometimes for the materials as well. The peasants must engage in some by-employment to supplement their agricultural income and are in no position to refuse even very low rates of payment for their work. The Tonya himself can therefore determine, unilaterally, the price of the peasants' labour, and piece rates are consequently low.

Several factors contribute to the gradual disappearance of the early Tonya system of industry. The demand for its products, which are typically articles of Japanese consumption, is declining as Japanese daily life becomes more and more westernised. With the spread of the use of power and improved techniques, the sphere of simple hand production is steadily contracting. If the long-term trend of rising agricultural incomes continues, the incentive for farmers to engage in such

unremunerative work may be expected to diminish.

Already few examples of simple household hand production remain, and with the general development of the economy, the trend away from the pre-manufacture methods and organisation of the early Tonya system may be expected to continue.

Dependence on commercial capital

(b) The Old Tonya System

What is here called the "Old Tonya System" of production corresponds more or less to the stage of manufacture as it appeared in Japan. It will be remembered that Japanese manufacture was - and insofar as it survives, still is - of a rather different form to that familiar in the West. Even though peasants lost their land, they continued to engage in agriculture as tenant farmers on small holdings to a greater extent than, for example, in England. The early Tonya system was based on the necessity of these small tenant farmers to supplement their agricultural incomes by engaging in some industrial activity which would still allow the peasant family unit to continue to engage in agriculture. This meant in practice that industrial activity was largely carried on in the workers' ⁽³⁾ homes. Since this kind of home industry was regarded as a

(3) The alternatives were for the workplaces to be near the workers' homes (e.g., silk filatures), or for a member of the family to go away to work for a period of time (e.g., the recruitment of girl workers for the cotton spinning industry).

supplement to the family income rather than its main source, the Tonya felt no obligation to provide a living wage to those who were, for all practical purposes, his employees. It was, therefore, in the interests of the Tonya to retain the system of home industry as long as possible, since it released him not only from the responsibility of maintaining his workers, but also from the necessity for fixed capital investment in buildings and equipment. The system of home industry was, therefore, retained, but organisation and technique developed considerably.

The old Tonya system is distinguished from the earlier form by greater specialisation and division of labour, by provision of materials and working capital by the Tonya, by an increase in full-time labour, and, in some cases, by the employment of apprentices and journeymen by the head of the outworker family (not by the Tonya himself). Conditions vary greatly from industry to industry, but on the whole the labour is of poor quality, wages are low and conditions of work are bad.

Three main types of old Tonya system industry can be distinguished according to the type of labour employed. The first type is based on the part-time labour of peasants in areas which are either poor agriculturally, or which possess special advantages for a particular



industry. The second type uses the pools of low grade labour available in the poorer districts of large cities. The third type is based on the labour of master craftsmen working in ateliers attached to their dwellings, and employing an apprentice or two.

The use of peasant cottage labour under the old Tonya system is most common in the hand-woven textile industry, but it is also found in a variety of other industries.

The manufacture of silk and cotton textiles for Japanese consumption by agricultural families is widespread in Japan, but is most common in Gumma and Ibaraki Prefectures and in Hakata and Kagoshima in Kyushu. Hand-woven cotton textiles are manufactured in Kurume and other districts of Kyushu and in Shizuoka Prefecture.

The weaving of silk in the areas around Isezaki and Ashikaga in Gumma Prefecture is typical of the by-employment of farming families in districts which are poor from an agricultural point of view. The weaving is done in a room or shed attached to the farmer's cottage. The floor is of earth and lighting is usually poor. Power looms are now becoming common but many hand looms still
(4) survive. This area produces a large amount of raw silk

(4) Even in 1949 there were 117,646 hand looms as against only 44,761 power looms engaged in the production of narrow width silk and artificial silk textiles for home consumption. See Chusho Kigyo Cho (Bureau of

and the farmers originally wove silk produced and spun by themselves. This is no longer the case, since the reeling and spinning of silk is now a specialised industry organised on the factory system. There are two types of establishment. One is known as Hataya or ⁽⁵⁾Orimoto, and these weave on their own account to the order of a local Tonya. The other is variously known as Chimbata or Debata and these weave (for piece-wages only) to the order of a Hataya. While the distribution of the product is in the hands of the Tonya, the Hataya or "Weavers" control the process of production. The Hataya are engaged full-time in the industry. They buy yarn from a silk merchant (often through an intermediary known as Nakagai) and put it out to be dyed and sized. Some of this yarn is woven by the Hataya themselves, but most of it is put out to farmer-weavers (Debata) to be woven for piece-wages. The woven cloth is collected by the Hataya who sees to the inspection and finishing and

Medium and Small Business) "Kore kara no Chusho Kigyo" (The Future of Medium and Small Business) Tokyo, 1949; p. 231.

- (5) These are sometimes known as Orimoto and sometimes as Hataya. If there was once a distinction it seems to have become blurred and the terms are used practically interchangeably. Possibly those which weave more on their own account should be called Hataya and those which put out most of the yarn should be called Orimoto.

sells to the local Tonya. The Tonya in turn sells the cloth to merchants in the centres of consumption or to department stores.

With the introduction of power looms this system tends to shade into the new Tonya system, and it is not easy to draw a hard and fast line between the old and new systems. In general, the old system corresponds, as already mentioned, with manufacture and the new Tonya system with small factory production using power machinery. In many industries the difference is obvious enough, but in the weaving industry the distinction becomes rather blurred. Although the use of power machinery is a characteristic of the new Tonya system, the use of one or two power looms by a peasant family can hardly be regarded as constituting a factory.

The production of wicker trunks in Tamba and of paper umbrellas in Gifu provide examples of strongly localised peasant production under the old Tonya system. The Tonya provides the materials (bamboo and paper in the case of the umbrella industry) and puts them out to peasant households which specialise in a particular process. One family may split the bamboo; another cuts the paper to shape; another makes the handles; another assembles the frame and yet another attaches the paper cover to the

frame. In busy times the families who receive work from the Tonya may, in turn, put out some of it to friends and neighbours.

In the above examples, the old Tonya use the excess labour of peasant families unable to earn a livelihood solely from their small plot of land. In the same way, families in the poorer districts of large cities are able to supplement their incomes by accepting work from Tonya. The typical Japanese slum consists of long terraces (Nagaya) of small tenements built right up to the street. Each tenement consists of two - sometimes three - rooms, of which one does duty for a workroom. Very often the workroom is also used as a living room. Because the windows, particularly in western Japan, are usually covered with wooden lattice, the lighting is poor.

In general, the organisation is similar to the cases already quoted. The Tonya or "maker" as he is now sometimes called, buys materials and puts them out process by process to outworkers who are usually attached to one Tonya or, at the most, to two or three. These outworkers are engaged full-time in the industry. Often whole streets are engaged in such work for a single Tonya. Old people, women and children form the bulk of the labour force, since able-bodied men can normally earn a better wage by working in factories or as day labourers. The

simpler processes requiring no special tools and little special skill are put out either by the Tonya directly or by his full-time outworkers to others who do this work only as a by-employment. It is not uncommon to find high school students accepting this sort of part-time work to help to pay for their education. One may even find civil servants and bank clerks employing their evenings in this way, to supplement salaries which have not kept pace with the rising cost of living.

The manufacture of Japanese folding fans in the poorer suburbs of Nagoya City may be taken as a typical example of the old Tonya system in an urban area.⁽⁶⁾ The Japanese folding fan consists of bamboo ribs and a paper "ground", and its manufacture is divided into about nine main processes. One Tonya, or "Fan Maker", in Nagoya puts out work to 240 households as follows :-

Paper

1. Pasting of paper to make 3-ply paper and rough cutting out	(4 Households)
2. Painting or printing of designs	(40 ")
3. Folding	(25 ")
4. Trimming and edge gilding	(3 ")

(6) This description of paper fan production is based on personal observation in December 1952.

Bamboo

- | | | | |
|---|-----------------|---|---|
| 5. Making rib blanks (cutting,
splitting and shaving bamboo) | (8 Households) | | |
| 6. Rib-making (boring, shaping,
polishing and staining) | (100 | " |) |
| 7. Riveting ribs | (15 | " |) |
| 8. Shaving down rib points | (20 | " |) |

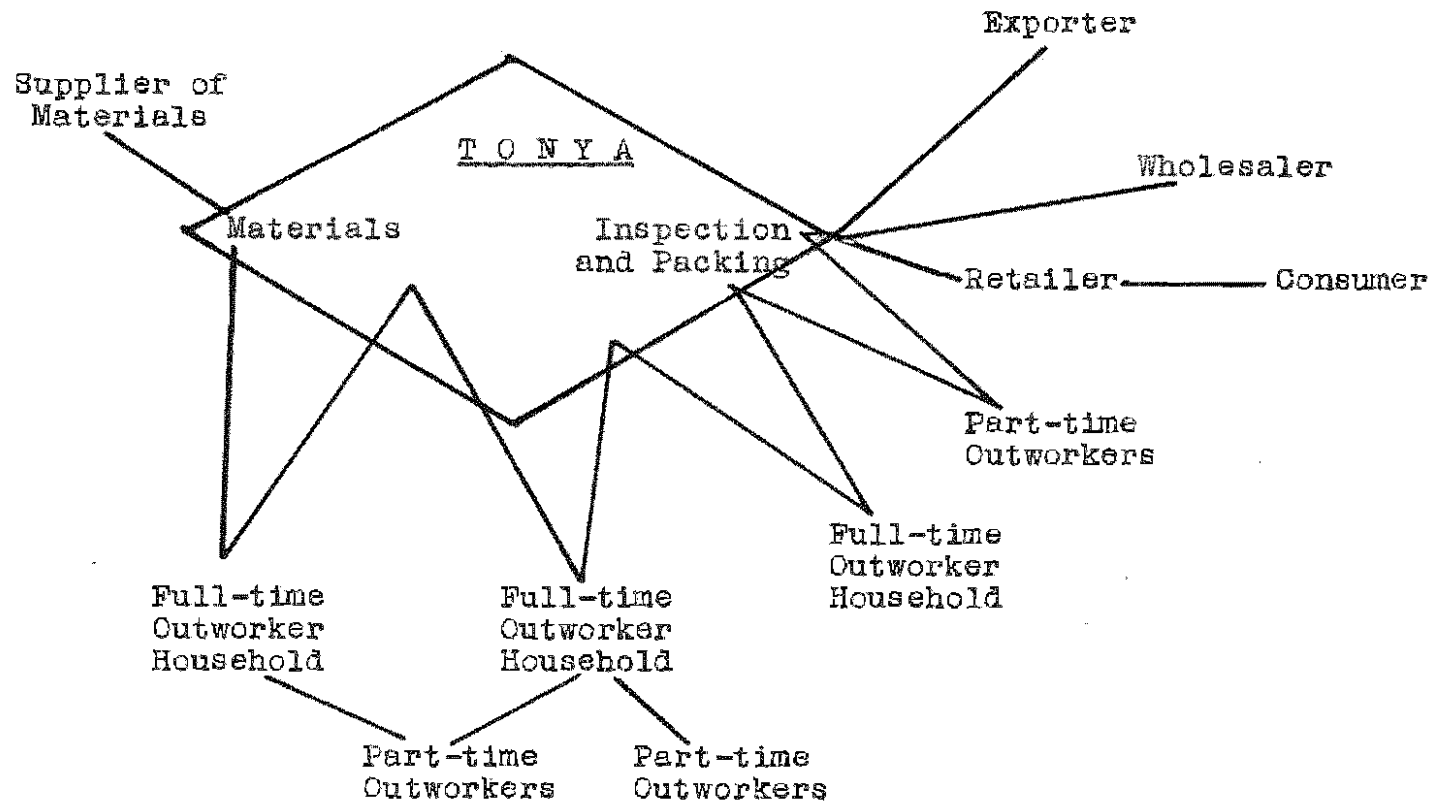
Assembly

- | | | | |
|---|------|---|------------------------|
| 9. Fitting bamboo ribs to
paper "ground" | (25 | " | |
| 10. Inspection, attaching
accessories, packing | | | Done by <u>Tonya</u>) |

In this particular case, the Tonya does not put out the making of a fan as a whole, but passes on the goods in process from one set of outworkers to the next. Not all processes require the same degree of skill. Process 1, for example, may be performed by part-time labour, even by school children anxious to earn some pocket money. Process 2, on the other hand, requires a good deal of skill and sometimes real artistic ability. The fitting of the bamboo ribs to the paper ground - process 9 - requires great manual dexterity. The best workers in this department are regarded as the virtuosi of the industry and earn comparatively high wages.

Both full-time and part-time workers are, therefore, employed. Part-time workers require no special machinery or tools, but full-time workers may use simple presses or punches. These tools may be bought by the workers themselves or they may be rented from the Tonya. Alternatively, the Tonya may lend money to the workers to buy equipment. This supposes a fairly strong connection between the outworkers and a particular Tonya. This is, in fact, the case, and outworkers are usually attached to one, or occasionally two, Tonya. The Tonya expects his workers to perform his work in preference to work put out by others, but if he has no work to offer, his outworkers may accept orders from elsewhere.

The following chart shows the organisation of the fan industry, and is typical of the old Tonya system in an urban area.



The heterogeneity of Japanese small scale industry, even within a comparatively small category, is well illustrated by the structure of the geta thong industry in Asakusa, one of the poorer industrial suburbs of Tokyo. ⁽⁷⁾ Geta are a type of wooden clog, and are the traditional everyday street footwear of the Japanese. The thongs (hanao) consist essentially of a piece of thin rope or cord, covered with velvet or other cloth, leather or plastic material.

The manufacture of these thongs is carried on under the old Tonya system and, like the paper fan industry, is based on the cheap labour of city slum dwellers. The industry is organised on three different systems which represent three different ways in which manufacture (in the technical sense of the word) has developed in Japan. Under the first system, which one suspects represents the earliest development, the Tonya simply provides materials, and sometimes tools, and himself takes no part in the process of manufacture. The materials are put out to an outworker who undertakes the whole of the manufacturing process. This man then

(7) This description of the geta thong industry is based on Chusho Kigyo Cho, Shinko-bu, Koho-ka (Information Section, Promotion Department, Bureau of Medium and Small Business) "Hanao Seizo Gyosha Keiei Jittai Chosa" (Survey of Business Conditions among Geta Thong Producers) October 1951, and also on personal observation in October 1952.

performs some of the processes himself (usually finishing only) and in turn puts the rest out one by one to other outworker households. He then delivers the finished work to the Tonya and receives piece wages of so much per hundred pairs. Of the 53 geta thong Tonya in Asakusa, eight operate in this way.

Under the second system the Tonya himself takes some part in the productive process, usually cutting out, and occasionally finishing as well. The other processes - about nine operations are involved altogether - are put out by the Tonya direct to the outworkers, either full-time workers or to those who accept such work as a by-employment (factory workers' families and unemployed persons). The Tonya himself in this case employs three or four workmen directly in his own establishment. Outworkers are nearly always one-man establishments with perhaps some help from members of the outworker's family. (8) As in the fan industry, a full-time outworker normally (9) works for only one Tonya.

(8) Out of 183 outworker households in Asakusa 102 are one-man establishments and 78 consist of two members of the same family.

(9) In Asakusa 202 out of 261 full-time outworkers work for only one Tonya and 41 work for two.

Under the third system the Tonya makes the entire article in his own workrooms and in this case may employ from 6 to 10 workers directly. This system is not very usual, and only 7 of the 53 Tonya in Asakusa operate in this way, as opposed to 38 who operate on the second system.

This example of the geta thong industry has been quoted to show the variety of organisational forms which exist under the old Tonya system. These three types and various combinations of them can be found in many other industries organised on the old Tonya system and using the pools of cheap labour available in poor urban districts. The manufacture of match boxes, pencils, brushes, paper boxes, some toys, garments and many other articles is carried on in the same sort of way as in the examples quoted.

Rather different from the above examples as far as the type of labour employed is concerned, is that group of industries in which master craftsmen and artisans work under the control of a Tonya. In this category are the manufacture of damascene ware, lacquer, cutlery, some ceramics and other products which require special skill or artistic ability. Such industries may be carried on in either urban or rural areas, depending on the nature of the raw material, but the workers are craftsmen, and not

casual peasant or slum labour. The Tonya may be a merchant pure and simple, or he may be a master craftsman himself. The organisation of the industry varies according to the nature of the Tonya. If a master craftsman is himself financially strong enough to act as a Tonya, and to sell the product in the centres of consumption as well as organising the manufacturing process, there is no room for a purely commercial dealer between the manufacture and the marketing processes. If, on the other hand, there are no master craftsmen with sufficient financial strength and market contacts to handle marketing themselves, there is a function for a "production centre Tonya" and so another step is introduced into the organisation of the industry. The "production centre Tonya" acts as the link between the small producers and the national or overseas markets.

As examples of the old Tonya system in a skilled craft industry we may take the manufacture of cloisonne in Shippo Mura and the manufacture of damascene ware in Kyoto. In the first case, sales are made through "production centre Tonya". In the second, certain master craftsmen themselves perform the functions of Tonya.

(10) These descriptions are based on personal observations made in December 1952 and January 1953 respectively.

The manufacture of cloisonné consists of eight processes each normally carried out by a specialised workman. First, the article - perhaps a vase or box - is designed by an artist. Then the body is made from copper or alloy sheet. The design is then transferred to the copper body. Over the lines of the design, metal wire is applied to form little dividing walls between sections of different colours. The making of the enamels is a separate process. Painting with enamel and firing in a kiln form the central part of the work and the workshops which perform them are in a position to control production as a whole. When the enamelling has been repeated a sufficient number of times, the surface is polished and metal fittings are attached. Of these eight separate types of craftsmen only one type - the enamellers - work on their own account directly to the orders of a Tonya. The rest perform one process at piece rate wages on materials put out to them by the enamellers. The labour force is composed of trained craftsmen and apprentices. Family and casual part-time labour are rare.

It should be noticed that the enamellers occupy a special position in this industry, analogous to that of the Orimoto or master weavers in the silk weaving industry. The lacquerers occupy a very similar position

in the lacquer industry, controlling production and forming the link with the product markets through the
(11)
local Tonya.

In the case of the manufacture of damascene ware in Kyoto, one section of the trade is in such a strong position that the local Tonya has dropped out altogether. Two or three master craftsmen, and one in particular, have taken over the marketing functions of the Tonya and sell direct to Japanese retailers and department stores and to overseas buyers.

The heterogeneity of Japanese small scale industry has already been mentioned more than once, but it can hardly be overemphasised. Within the present category, which has been called the Old Tonya System of industrial organisation, we have already distinguished three main types according to the kind of labour employed - poor farmers, depressed urban communities or artisans. A hard and fast distinction cannot, however, be drawn in every case. The lacquer industry of the Aizu district, for example, uses mainly artisan labour, but some of the simpler processes are put out to agricultural households. Moreover, the Old Tonya System shades into the Early Tonya System at one end, and into the New Tonya System at the other.

(11) See Isobe Kiichi, "Nihon Shikki Kogyo Ron" (The Japanese Lacquer Industry) Tokyo, 1946.

Nevertheless, the Old Tonya System possesses certain definite characteristics which mark it off as a separate category within that huge group of small and medium scale industry which is dependent on commercial rather than on industrial capital. In the first place, the method of production is invariably some form of manufacture in its narrower sense. Normally, this is what may be called "dispersed manufacture". The actual technique of production is very similar to that of Adam Smith's pin factory, but it is as though each of Smith's workers performed his particular process in his own cottage and not under a single roof under the direct supervision of the entrepreneur. Secondly, the entrepreneur himself provides circulating capital in the form of materials, wages and credit and is responsible for the sale of the

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- (12) Division of labour is often extremely minute. In the dyeing of material for plain black jackets bearing black and white family crests, for example, seven separate sets of outworkers are involved. The first indicates where the crests will come. The next spreads round patches of dye-resistant paste over these areas. The third then dyes the length of material black. The fourth washes out the dye-resistant paste from the spots where the crests are to go. The fifth sets the dye and stretches the material. The sixth paints in the crest with special permanent ink and the last process (performed by a separate outworker) consists solely in cleaning up the area around the crest.

product, but does not normally take a significant part in the process of production itself. He is concerned mainly with submitting patterns, receiving orders, keeping in touch with markets and in general deciding what and how much to produce. Actual production is entrusted to the outworkers.

These outworkers form the third characteristic feature of the Old Tonya System. Apart from the artisans, whose position is somewhat better, the outworker's lot is not a happy one. Although he is free from direct supervision and may work when and how he pleases, he must usually work very long hours. When he receives work from his Tonya he is also set a time limit by which the work must be completed. If the work is not completed in time the outworker may incur a penalty. The Tonya has a good reason for enforcing this time limit, since, in passing the goods in process from one set of outworkers to the next, delays might cause serious dislocation of production. In busy times, however, this may mean that the outworker is forced to work long stints, sometimes as long as fourteen or fifteen hours a day. Not only are the hours long, but conditions of work are often bad. While there is not necessarily anything inherently unpleasant in working at home, the typical urban outworker's tenement is cramped and ill-lit. The dwelling of his counterpart in the rural

districts is probably more spacious, but the workroom is dirty and cluttered with agricultural paraphernalia.

Since the outworker works at home he is not protected by factory laws or labour legislation. In the eyes of the law he is the proprietor of an independent one-man workshop. As he is not legally an employee, the Tonya or whoever provides him with work, has no responsibility to provide continuous work or a regular income. If business is slack orders may cease at any time and for any period. The full-time outworker is thus entirely dependent upon the goodwill of the Tonya. Even the outworker who accepts such work as a by-employment is at the mercy of the Tonya to the extent that the supplement to his income is indispensable. The result is sweated labour and low rates of payment. The possibility of improving their position by combination is limited by the fact that the outworkers are dispersed. Some co-operative organisation has been achieved since the Pacific War and has sometimes
(13)
had a dramatic effect.

It is pre-eminently the Old Tonya System which has laid Japanese industry open to the charges of sweated labour, starvation wages and "social dumping", and so long

(13) See below, Chapter IV, p. 206.

as this system of industrial organisation survives in Japan these charges will be applicable. The defenders of the system claim that it performs a service in providing work for types of labour which would otherwise be unable to find employment at all, and that any goods produced or income generated in this way is all profit. This may be the case in the present condition of the Japanese economy. Only if economic conditions were to improve steadily is it possible that the Old Tonya System, with all its social and economic disadvantages, might decline.

Dependence on Commercial Capital

(c) The New Tonya System

In analysing the various types of Japanese medium and small scale industry, the actual forms themselves are not so important as the stage of industrial development which they represent. For this reason the stage of industrial development represented, rather than the external form of enterprise, is taken as the basis of classification. Whereas the Old Tonya System represents manufacture in the peculiar dispersed form which it took in Japan, the New Tonya System represents small scale factory production using power driven machinery.

It was pointed out in discussing the evolution of medium and small scale industry in Japan, that the age of "cottage manufacture" in Japan corresponds roughly with the Meiji period (1868-1911). This does not mean that the Old Tonya System has been entirely supplanted or that it is no longer important both quantitatively and in Japanese industry as a whole. It is true to say, however, that whereas the overwhelming majority of native Japanese industry took this form before the first World War, the introduction of power (particularly electric power) and the mechanisation of native industry during and after the war, pushed manufacture out of many of the fields with which it had traditionally been associated. At the same time the majority of new industries which were introduced to Japan in that period never passed through the stage of manufacture at all, and were carried on by machine production in small factories from the start. There was, therefore, a marked change in the nature of native Japanese industry roughly during and after the first World War.

The change from manufacture to small factory production did not, however, involve a break with the old Tonya tradition of control by commercial capital. The two elements of the old system - the Tonya and the outworker - remained, and their relationship was adjusted to changed technical conditions by a kind of compromise. With the

introduction of machinery and the prosperity of the immediate post-war boom, there was a determined attempt on the part of the outworkers to break free of control by commercial capitalists and to become independent industrial units. In this attempt they were assisted by government action in the form of the Industrial Association System (Kogyo Kumiai Seido, 1925). The aim of these Industrial Associations was to enable small producers to dispense with Tonya by performing their function through co-operative action. Faced with the loss of their function the Tonya converted part of their capital into industrial capital and themselves joined the associations as producers. In view of their connection with the markets and their superior financial strength, the Tonya were thus able to retain control. In the process they compromised to the extent of going part of the way (but not the whole way) to becoming industrialists themselves. The outworkers, on the other hand, also compromised to the extent that, although they had in form become small factory owners, they remained dependent on semi-commercial capital in their relations with the market. In the process a few Tonya were displaced and a few small factories became independent, but these were exceptions.

The result was the New Tonya System: a compromise between the formation of independent "native" industrial capital and the continued domination of purely commercial capital. A number of features distinguish it from the Old Tonya System. First and foremost is, of course, the use of power driven machinery rather than reliance on handwork. The power is normally provided by electricity, which though by no means abundant - the Japanese are even more familiar with power cuts than we are - is the cheapest form of power available, and possesses the great advantage (from the small user's point of view) of being infinitely divisible into small units. The machinery used is usually of a simple type - simple general purpose lathes, drills, presses and grinders. The equipment is usually in rather poor condition and probably obsolescent, and the small factories rely heavily on the skill and judgment of the workers to make up for the inadequacy of the machinery. The exception is the power loom, which is by its nature a fairly complicated piece of machinery. Nevertheless one can say that the degree of mechanisation of these small factories is considerably less than that of larger plants.

(14) This is emphasised by the fact that the methods of production in small plants are considerably more labour-intensive than those in the larger factories. If the ratio of labour cost to value added is taken as an index of mechanisation the comparison is as

In the second place the scale of operations is somewhat larger than under the Old Tonya System. Whereas the typical outworker establishment under the Old Tonya System consists of one man, possibly assisted by one or two members of his family, the typical "small factory" of the New Tonya System consists of an owner-manager, possibly one or two members of his family and anything from four or five to fifty or sixty employees.

(14) (Contd.)

follows. The industries taken are typically organised on the New Tonya System.

Ratio of Labour Cost to Value Added by Scale of Plant (1951)

Scale of plant by amount of capital (Unit : million yen)

	Food Products	Textiles	Paper Products	Glass and Ceramics	Metal Products
Under 2	25.34	57.46	45.62	76.45	83.52
2 - 5	22.16	44.25	52.37	75.62	65.56
5 - 10	33.42	62.91	43.48	117.03	74.33
10- 50	16.80	36.48	36.92	60.21	59.99
50-100	16.28	40.42	24.77	39.81	39.62
Over 100	15.09	26.43	26.76	43.71	38.96
Average	20.24	34.22	32.40	55.16	69.60

From Chusho Kigyo Cho (Bureau of Medium and Small Business), "Chusho Kigyo Kankei Tokei Shiryo Shu" (Collected Statistical Material on Medium and Small Business) February 1953; p.18.

It may be assumed that the majority of these "small factories" come within the range of from five to fifty employees. In the weaving industry, for example, about 70% of all weaving sheds (as opposed to cottage weavers) have between ten and one hundred looms which, if we allow two looms per employee, means that most of these establishments employ between five and fifty persons. In the field of plastic products, a typical New Tonya System industry, the typical size of a small factory seems to be from 10 to 15 employees. In the ceramics industry of Aichi Prefecture, which includes the large centres of Seto and Tokonabe, three separate size ranges exist. The smallest which use mainly family labour and have at most one paid hand are either organised on the Old Tonya System or work as sub-contractors for larger potters. The biggest factories employing over 50 workers have their own sales organisation and are independent concerns. These larger factories very often act as Tonya in relation to smaller firms. It is the medium sized plants of from 10 to 20 employees which are organised according to the New Tonya System.

(15) The figure is from "Nihon Boseki Gappo" (Japan Spinning Monthly) April 1948.

(16) The writer's estimate, confirmed by members of the industry - October 1952.

With this difference in size goes a difference in the composition of the labour force. Whereas the outworker households under the Old Tonya System were composed almost entirely of family labour, the "small factory" depends mainly on employed labour. This employed labour is, however, inferior in quality to that of large scale industry. As Table 11 shows, the proportion of men and women in the prime of their working life in the labour force of small factories is appreciably smaller than that in large factories.

(17)

Table 11 - Age Composition of Labour by Scale of Plant

Age groups	Smaller Factories (30-99 employees)		Larger Factories (over 500 employees)	
	Male	Female	Male	Female
15	0.4%	0.8%	0.2%	1.5%
16	2.0	4.6	0.8	7.9
17-18	7.5	18.3	4.8	23.6
19-20	7.5	17.0	6.8	22.7
21-25	17.7	25.6	20.6	29.4
26-30	14.6	9.0	16.8	6.7
31-35	12.6	5.2	16.7	2.8
36-40	10.9	4.3	14.0	2.3
41-50	16.2	5.8	15.3	2.5
51-60	8.1	2.2	3.7	0.6
Over 60	2.4	7.2	0.3	--
Total	100	100	100	100

(17) Chusho Kigyo Cho (Bureau of Medium and Small Business)
"Chusho Kigyo no Ichi to Mondaiten" (The Position
and Problems of Medium and Small Business) Tokyo,
1950; p. 228.

If we assume, as the Japanese themselves do, that the best years of a working man's life are from 21 to 40 and for a woman from 17 to 25 we find that small factories have only 54% of male employees and 61% of female employees in this age group, as against figures of 68% and 76% respectively for the large factories. Small factories thus employ a correspondingly larger proportion of elderly and very young workers. This is accounted for on the one hand by the fact that workers who have retired from regular jobs in large factories at the age of fifty then accept employment in small factories, often working until they are over sixty years of age. After retiring from regular employment in the big plant these old people must normally accept a reduction in wages on going into a small factory, but since they are still expected to contribute to the family income, this is usually accepted philosophically enough. On the other hand, the relatively high proportion of younger employees of from 15 to 19 years of age is accounted for by the relatively large proportion of apprentices in small factories. In general the smaller the factory the greater the percentage of apprentices. In the smallest plants the percentage was as high as 40% before the Pacific War, though it has probably fallen since the war. Although labour in the

(18) "Tokyo Shi Shokogyo Chosa" (Tokyo City Survey of Small Industry) 1935.

small factories of the New Tonya System is modern industrial labour in a sense in which the outworkers of the Old Tonya System are not, it is a kind of second class industrial labour.

The relationship between labour and management in Japan's small factories differs considerably from that in a large scale factory. Although this relationship is changing, it still retains many features of an earlier society which the Japanese themselves speak of as "feudal". The use of this term is loose, but it is meant to express a pre-industrial, pre-capitalist master and servant relationship, in contrast to the "modern" relationship of capital and labour. This is shown in the practice of providing board and lodging for employees. (19) In the small scale woollen and worsted weaving industry of the Owari district of Aichi Prefecture, for example, two thirds of all employed workers live with their employers, in housing provided by them. (20) The same is true of the textile industry of the Hokuriku district. (21)

(19) This is also done in very large scale cotton mills, but it is not a usual practice in large plants.

(20) According to the Government Wool Technology Research Station at Owari.

(21) See Shimazu Chitose, "Ikite iru Joku Aishi" (The Real Life Tragedy of Girl Workers) Bungei Shunju, February 1954.

Most of the workers in these industries are girls whose families (usually marginal farmers) live some distance away, and some provision for their housing is necessary. Conditions in these lodgings vary a great deal. Some, which the writer was shown at Owari, were of a very good standard. In general, however, conditions are poor, and in some cases (e.g., in Johana) are very bad.

Conditions of work in small factories are usually bad. Whereas labour legislation does not apply to household industry, it is supposed to apply to any small factory employing five or more persons. In practice there is a realisation that since small factories largely depend for their existence on low wages and long hours of work, strict enforcement of the Labour Standards Law would make it impossible for them to carry on. In practice, therefore, this type of legislation is not strictly applied to small factories. Nevertheless, the number of infringements reported from small factories is very large, as the following table shows.

(22)

Table 12 - Breaches of Labour Standards Law by
Scale of Factory

	Number of Factories Reported			
	Total	Over 100 employees	10 - 99 employees	Under 10 employees
1952 Jan.	11,691	611	4,920	6,160
Feb.	12,823	740	5,331	6,752
Mar.	11,344	728	4,758	5,858
Apr.	11,317	868	4,725	5,724
May	12,334	957	5,610	5,767
Jun.	11,706	1,012	5,692	5,002
Jul.	16,110	1,917	8,026	6,167
Aug.	10,213	727	4,828	4,656
Sep.	10,235	866	4,810	4,559

Hours of work are long and irregular. Twelve hours a day is not uncommon, and hours may be even longer when orders are heavy. Workers are expected to realise that their employer is not a free agent and is dependent on the Tonya for whom he works. When a rush order is received, or when work is accepted at so low a rate of payment that the small factory owner and his workers can make a living only by working unusually long hours, the employees are expected to co-operate. If times are hard, the employees are expected to accept a cut in wages to

(22) Chusho Kigyo Cho (Bureau of Medium and Small Business), "Chusho Kigyo Kankei Tokai Shiryo Shu" (Collected Statistical Material on Medium and Small Business) February 1953; p. 38.

enable the small factory to carry on. Often, in fact, wages may be in arrears because the small factory owner is unable to meet the wage bill until he himself can collect payment from the ⁽²³⁾ Tonya. On the other hand, when times are good the employees expect, and usually receive, a substantial bonus.

Contact between management and labour is close, particularly in the smaller factories (up to 20 employees) where the owner usually works alongside the employees. In spite, however, of the paternalistic attitude of the employer, conditions are worse in the small factories than in the large, and wages are lower. Few workers, therefore, would prefer a job in a small factory to one in a large modern plant, and accept such positions only because the alternative is unemployment.

In addition to machinery and employed labour, the small factory of the New Tonya System is distinguished from the outworker household of the Old Tonya System by the conditions of business management. Whereas the outworker is for all practical purposes an employee of the Tonya, the owner of a small factory is in fact, as well

(23) In May 1952, for example, over half a million pounds of unpaid wages were outstanding, mostly in small factories, Ibid. p. 37.

as in theory, an entrepreneur in his own right. Although he frequently operates a machine alongside his workman, he is responsible for securing orders, negotiating contracts, buying materials and equipment and paying wages. In this he may be assisted to some extent by the Tonya with whom he deals. Some Tonya provide circulating capital in the form of materials or of financial accommodation. Some lend equipment or sell it on time payment. Some even provide technical assistance, jigs and gauges. This type of aid is, however, becoming less common, as the financial strength of the Tonya themselves has shown a marked decline since the Pacific War. The small factory owner is also the accountant of his business and is responsible for keeping a set of books, making tax returns and raising loans. This function he usually performs very imperfectly. Of 148 small factories examined by Nagoya City in 1949, (24) 106 were found to have inadequate accounting systems. There is some attempt to separate business and household accounts, but the separation is by no means complete.

The small factory itself is usually a rather rickety wooden building or series of sheds, nearly always adjacent to the owner's living quarters. It is generally

(24) Chusho Kigyo Cho (Bureau of Medium and Small Business) "Chusho Kigyo no Ichi to Mondaiten" (The Position and Problems of Medium and Small Business); p.210.

poorly lit but well enough ventilated through broken window panes and cracks in the warped wooden framework. The building is hot in summer and cold in winter and the surroundings are muddy in wet weather. The layout of the machinery is often inefficient and crowded. It is not a pleasant place to work.

Let us turn now from the small factory owner, his employees and his rather shabby factory to the Tonya, on whose patronage they all depend. The "New" Tonya, as we have already seen, is to some extent an industrialist. His part in the productive process may be limited, but it is certainly greater than that of the "Old" Tonya. We have already seen how the Tonya came to enter the productive process himself. He may fit into that process in any of three ways. First, in the course of mechanisation some processes are likely to become more highly mechanised than others and to require operation on a somewhat larger scale. These, since they require considerable capital and are likely to be "key-points" of the productive process, give the Tonya a considerable measure of control from within the industry itself. In the weaving industry, for example, the old Tonya took no part in production which was organised by the Orimoto. The new Tonya, however, often controls the dyeing and finishing processes. This requires a considerable

investment of capital but gives the Tonya control over the small weaving sheds in his area. Similarly in the pottery industry the new Tonya probably owns a kiln, and in the knitted goods industry the Tonya often knits the fabric.

Secondly, in the production of some goods, the finishing processes give the product some distinctive quality (usually of appearance only) on which its sale largely depends. These important processes are often performed by the Tonya who has a special factory for the purpose. This final process may be no more than packaging, and occasionally even no more than the application of a well known trade mark. More often, as in the bicycle industry, it consists of assembly, painting and metal plating.

Thirdly, the Tonya's place in the industry may be based on special technical knowledge. In the metal toy industry, for example, the Tonya will usually have a factory of his own in which he designs new toys - often very ingenious ones.

With the mechanisation of the outworkers and their growth into small factories, and with the entry of the Tonya into the industrial process itself goes a change in the relationship between the Tonya and the producers.

The change in the relative financial strength of the two parties has led to a reduction in the degree of dependence on the Tonya. "With mechanisation and the growth in the financial and industrial scale of the producers, they are gradually eliminating the weak points of household production and are coming to have some sales power of their own. The necessity for relying on a merchant for buying of raw materials, sale of products and market activity in general is declining. In prosperous periods they (the small factories) are in a particularly strong position. Certainly the trend towards independence does not always proceed smoothly and the producer must still, particularly in periods of depression, rely on the Tonya for financial aid In general, however, there is no doubt that the degree of dependence has lessened, even if only because of the general increase
(25)
of scale."

Some small factories have a closer relationship with the Tonya than others. Those which work for only one Tonya and for no other, and are under his direct control - practically a branch factory - are called "attached"
(26)
factories, and their connection with the Tonya is very

(25) Tasugi Kiseu, "Shitauke-sei Kogyo Ron" (The Theory of Sub-contracting Industry), p. 130.

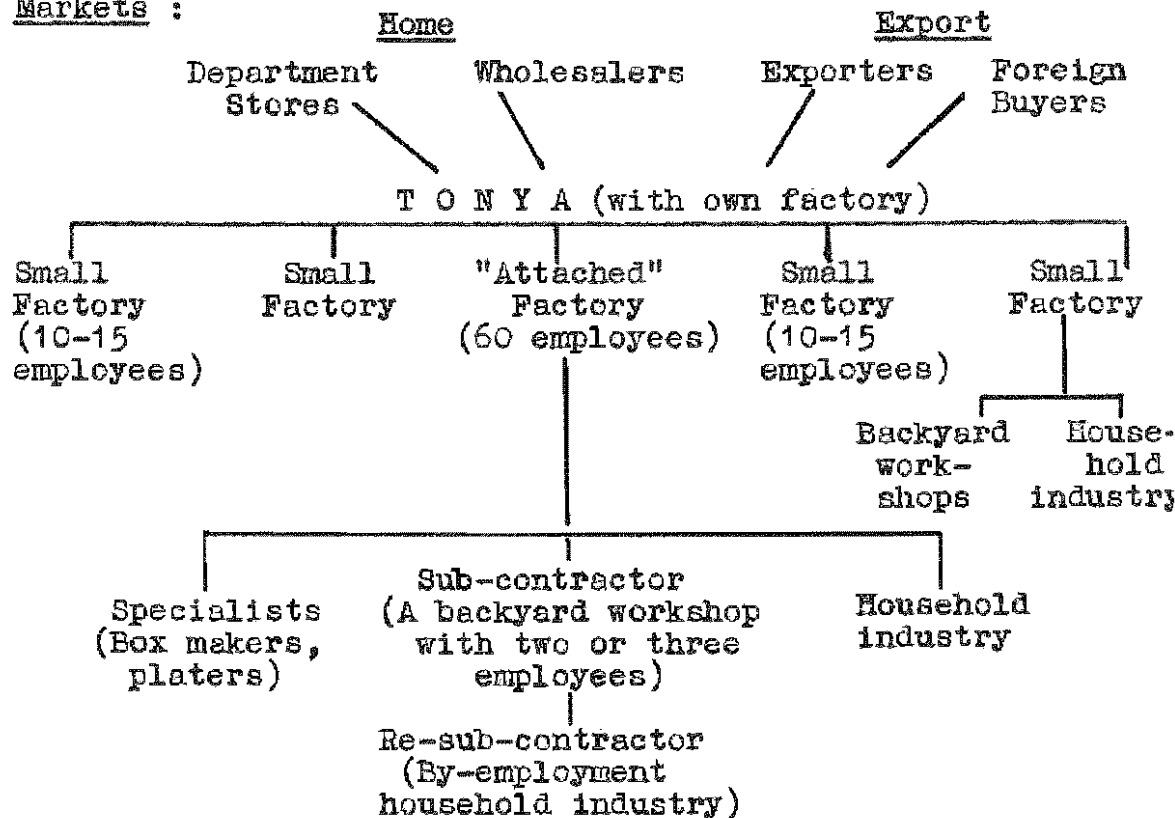
(26) Senzoku Kojo.

close indeed. The Tonya provides working capital, often a good deal of fixed capital and machinery, tools, jigs and gauges and technical advice. Other factories which work for more than one Tonya (usually for two or three) have a looser relationship.

Often the small factories in turn put out simple processes to even smaller workshops or even to household industry. The following chart will clarify the structure of the New Tonya System.

(27)
Chart No. 2 The New Tonya System (Metal Toys)

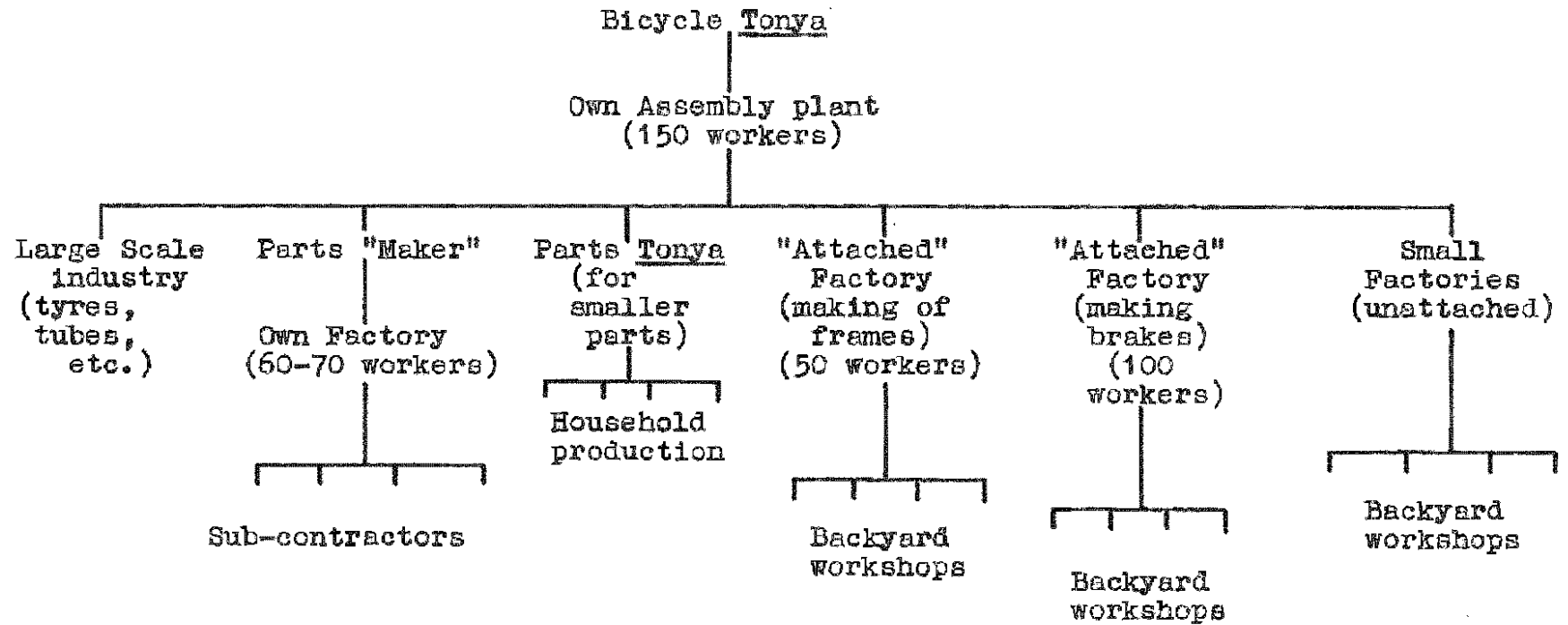
Markets :



(27) Based on a survey of the Tokyo metal toy industry made by the writer in 1952.

In this particular case, in the metal toy industry in Tokyo, the Tonya has 35 small factories under his control. As each of these factories averages about two sub-contractors, and the "attached" factory has about five, the Tonya controls, to a greater or lesser extent, over a hundred workplaces.

The control of the Tonya over the small factories is not always as rigid as in this example. Naturally enough, the degree of control varies in inverse proportion to the size of the factories. In the bicycle industry, for example, most of the industrial producers are connected to the Tonya (or "maker" as he is called) by little more than a simple buyer and seller relationship. The "makers" of parts - chain, wheel rims, hub assemblies, etc. - are themselves Tonya and have a number of small factories and household workers under their control. These parts "makers" then supply the "makers" of the complete machine with components. Some components (e.g., ball bearings, tyres and tubes) are made by large scale industrial enterprises over whom the Tonya can have no control. The organisation of the bicycle industry is shown in the following chart.



In this case a distinction is made between a "Parts Maker" who has his own factory, and a "Tonya" who simply organises household production of simple parts like spokes. This bicycle Tonya probably buys parts from at least ten of these semi-independent suppliers. In addition he has "attached" factories (practically branch factories) for frames, brakes and pedals. The rest of the work is put out to unattached small factories of from 10 to 20 employees each. The Tonya himself handles only assembly, painting and plating.

Sometimes the organisation of an industry under the New Tonya System may be very complex and include horizontal as well as vertical relationships. A highly successful example of this kind of organisation is the post-war sewing machine industry. Some sewing machines are made entirely by a single very large firm - several converted munitions plants do this - but in cost of production they cannot compete with a highly developed form of the Tonya System.

The industry is organised in three main associations. The Japan Sewing Machine Industry Association (28) consists of the Tonya or "makers" who handle the actual

(28) Nihon Mishin Kogyo Kai.

production of the sewing machines, and includes about
 (29)
 67 members. The parts makers are organised in the Sewing
 (30)
 machine Parts Industrial Co-operative Association, and the
 sales side of the industry has formed the Sewing Machine
 (31)
 Sales Association which contains 20 large wholesalers and
 exporters. The whole industry which must include at least
 two thousand workplaces, great and small, is controlled by
 the Japan Sewing Machine Industry Association and its
 regional organisations, which exercise a considerable
 degree of control over the members. The following chart
 shows the organisation of the industry in very abbreviated
 form. The three types of relationship between the Tonya
 (the members of the Sewing Machine Industry Association)
 and the factories under them are interesting. The "attached"
 (32)
 factories work only for one Tonya and are under his direct
 control. Relations are very close and the Tonya supplies
 considerable financial and technical aid. In order to
 maintain technical standards the Tonya must notify his
 association as to what factories he uses in this way. The

(29) December 1952.

(30) Mishin Buhin Kogyo Kyodo Kumiai.

(31) Mishin Hambai Kumiai.

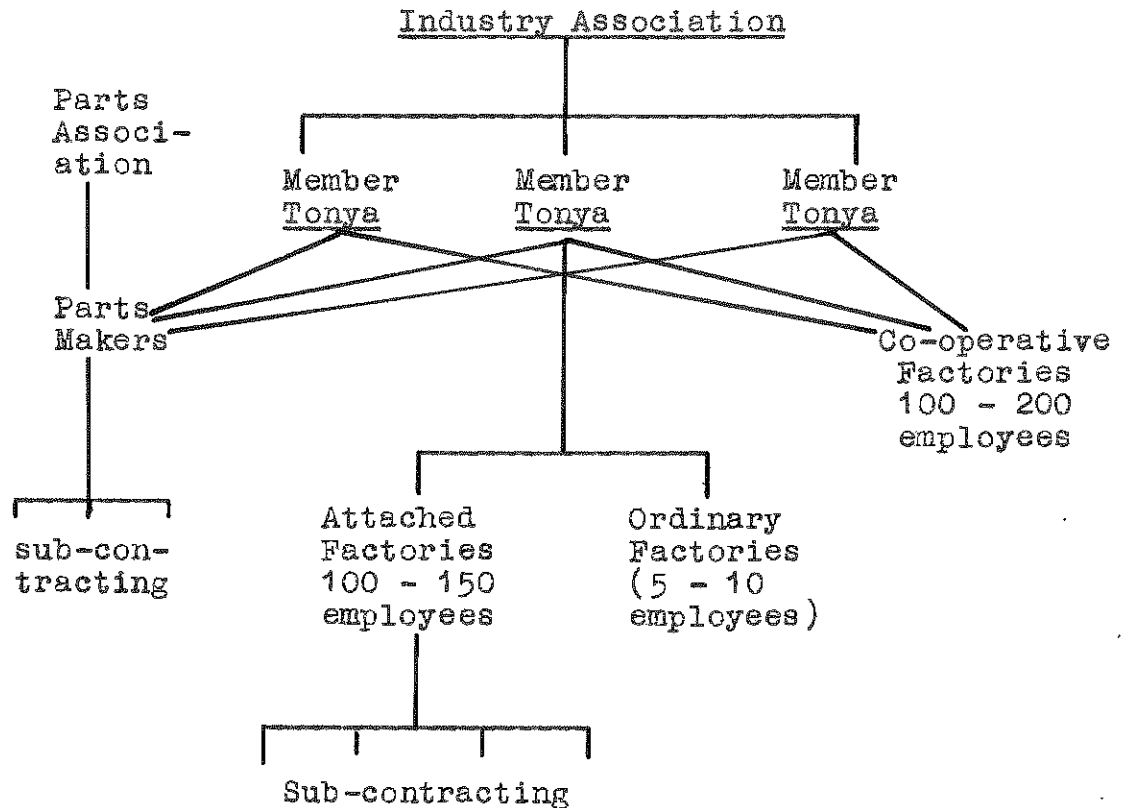
(32) In this case known as "designated" factories
 (Shitei Kojo).

(33)

"co-operative" factories are designated by the Association itself and work for several member Tonya but do no work for non-members. The "ordinary" factories are mainly small backyard workshops who may work for anyone and are only loosely attached to the Tonya.

Chart No. 4

The New Tonya System in its most developed form (The sewing machine industry)



(33) Kyoryoku Kojo.

(34) Ippan Kojo.

This example shows the highest stage of development which the New Tonya System has reached, and also represents the most advanced formation of industrial capital. The "attached" factories and the "co-operative" factories, as well as a large proportion of the makers of parts are already fully fledged medium or small scale industrial enterprises. The small workshops dependent on them must be regarded as being dependent on industrial capital within the industry rather than on external commercial capital; that is to say they must be regarded as sub-contractors rather than outworkers.

It appears as though the development of the New Tonya System and the progressive formation of native industrial capital, both by the Tonya and by the small factories, itself limits the extent to which that development can go without making unworkable the kind of relationships between industry and commercial capital which are the characteristic feature of the Tonya System in general. A new kind of relationship develops, first and foremost in the engineering industry, but, as the formation of Japanese industrial capital develops, in an ever increasing range of industrial production. These new relationships - dependence on industrial capital within the industry - we call the Sub-contracting System of industrial organisation, and the remainder of this chapter will be devoted to its description.

(iii) Dependence on industrial capital -
The Sub-Contracting System (35)

By the Sub-contracting System of industrial organisation is meant the system by which large industrial concerns put out work to smaller factories, the smaller factories being in some way dependent on the larger. That the orders come from industrial concerns is important, since it is this dependence on industrial capital within the industry rather than on external commercial capital which distinguishes the Sub-contracting System from various forms of the Tonya System. The fact that the source of orders, or parent factory, exercises some degree of control over the sub-contractor is also important. If a medium-sized engineering factory orders steel from a huge steel plant, this is not regarded as sub-contracting for the purposes of the classification adopted here. Sub-contracting is distinguished from simple ordering of work by the degree of dependence of the sub-contractor on the source of orders.

It should be emphasised that sub-contracting is not an entirely clear-cut category and that these distinctions tend to become blurred in borderline cases. A large industrial concern may, for example, employ some

(35) Shitauke-sei Kogyo.

of its capital commercially, and, particularly in putting out the manufacture of a complete article, may act very much like a Tonya. The control of the parent factory over the sub-contractor is also a matter of degree, and the precise point at which that control becomes definite enough to indicate a sub-contracting relationship must remain vague.

If the various forms of the Tonya System represent various stages in the development of native industry, the sub-contracting system represents a stage in the integration of native industry with large scale western industry. In this process of integration, medium and small scale native industrial capital has taken a definitely subordinate position; however, the basis of control is not pre-modern exploitation from outside the industry, but the repression of small capital by large.

Sub-contracting is most common in the engineering industry, in which the approach of native and western industrial capital has advanced furthest. Sub-contracting became important as the result of the enormous increase in the demand for the products of the engineering and allied industries which started about 1931. Between 1931 and 1937 the production of the engineering industry increased more than five-fold. Part of this increase was connected with the general rise in economic

activity, particularly in the export field, which (36)
followed the re-imposition of the gold embargo in 1931.

The greater part of the increase, however, must be
attributed to the great expansion of the armament
industries. The following table makes this clear.

Table 13 - Estimate of Military Orders to Civilian Factories (37)

(million yen)

	Military Expen- diture	Amount put out to Civilian Factories (A)	Production of Engineering Industry (B)	(A) — (B)
1932	810	364	805 (543)	45.2% (53)
1933	960	432	805	53.7
1934	990	445	1,082	41.1
1935	1,173	528	1,381	38.2
1936	1,199	532	1,609	38.5
1937	4,114	2,153	3,248 (2,397)	66.3 (90.5)
1938	6,096	3,283	4,359 (3,588)	75.3 (91.5)

(36) The value of exports rose from 1,518 million yen in 1930 to 1,932 million yen in 1933, a rise of almost 30% even though the yen depreciated by 40% as a result of the re-imposition of the gold embargo. (Figures are from the "Nihon Boeki Nempyo" (Japan Trade Year Book).

(37) Tasugi's estimate. See his "Shitauke-sei Kogyo Ron" (Sub-contracting Industry); p. 186. The figures in brackets are according to Mori Kiichi, "Nihon Kogyo Kosei Ron" (The Structure of Japanese Industry), Tokyo, 1943; p. 106.

About one half of the production of the engineering industry was devoted to armaments over this period. Large scale engineering works were flooded with orders. The following table shows the position in 1938.

(38)

Table 14 - Productive Capacity and Unabsorbed Orders
of leading Industrial Companies
(million yen)

	Productive Capacity (A)	Unabsorbed Orders (B)	(B) — (A)
Mitsubishi Jukogyo	64	270	421%
Hitachi Seisakusho	68	85.3	125
Shibaura Seisakusho	23	50	217
Mitsubishi Denki	20	40	200
Ikegai Tekko	6	20	333
Gasu Denko	9	20	222
Ishikawajima Zosen	15	29.7	264
Jidosha Kogyo	15	80	533

In this situation the leading companies, closely connected with government circles and receiving a large share of government contracts, were unable to fill these contracts from their own capacity and so put out to smaller firms a large proportion of these unabsorbed orders. No comprehensive figure for the amount of orders passed on in this way is available, but for the middle 1930's 200 million yen per year is probably a conservative estimate.

(38) From Inoue and Usami, "Kokka Dokusen Shihon Shugi Ron" (National Monopoly Capitalism), Tokyo, 1950; p. 132.

Not all of this amount can be regarded as sub-contracting as defined here. A good proportion was simple ordering of work or buying of components in the open market. However the amount of sub-contracting in the narrower sense must still have increased enormously during the (39) decade.

The factories available for such work were of two types. The majority of the larger - medium scale - factories had come into existence with the establishment of large scale engineering during and after the first World War. These factories sprang up to fill, as it were, the gaps between the large concerns in the government-fostered engineering industry. The second type grew from

(39) The extent to which some large scale engineering industries rely on sub-contracting can be gauged by the following figures published by the Economic Stabilisation Board Research Section, giving the proportion of the cost of production represented by sub-contracting for various industries in 1952.

Shipbuilding	70%
Automobiles	62%
Textile machinery	34%
Telephone Equipment	26%
Rolling Stock	(10%
	(77% (if simple ordering is included.)



small backyard engineering workshops of the kind known as "Machi Kojo". Below these are two or three strata of smaller workshops to whom work filters down from the larger concerns, so that the engineering industry as a whole is in the form of a huge pyramid.

Why do large factories put out work? In the early thirties the main reason was undoubtedly sheer inability to cope with the huge increase in orders from their own capacity alone. One might have expected their capacity eventually to increase sufficiently to cope with increased demand, but this was not the case. Part of the increase was considered temporary and large concerns were unwilling to invest in plant which might at some future time stand idle. Insofar as the increase in demand for producer goods was the result of the accelerator effect, this view was correct; but unwillingness to invest went further than this. It was the deliberate policy of large concerns to shift all risks of fluctuations in demand on to the smaller sub-contractors. As well as covering themselves against risks in this way, large concerns are able to maintain their rate of profit even though the actual work is done outside their own factories. Often, indeed, they find it more profitable to put the work out to small factories (which are competing fiercely with one another) than to do the same work in their own factories.

A post-war survey of the reasons why large factories put out work gave the following interesting results.

(40)

Table 15 - Why Large Factories put out Work

	Mechanical Engineering	Electrical Engineering	Transport Engineering	Precision Engineering	Average
Because outside factory possesses special technique	23.1%	29.8%	28.0%	27.7%	27.8%
Because the process put out is not important	20.5	10.3	14.6	14.4	14.4
Lack of capacity	32.9	26.3	22.6	25.5	25.4
As adjustment for changes in demand	15.5	11.6	8.3	10.6	10.7
Because cost of production is lower outside	7.7	16.3	23.6	18.2	18.2
Other	0.3	5.7	2.9	3.4	3.5

(40) Survey by Kokumin Keizai Kenkyu Kyokai (National Economic Research Association) 1950. Quoted from Chusho Kigyo Cho (Bureau of Medium and Small Business), "Chusho Kigyo no Ichi to Mondaiten" (The Position and Problems of Medium and Small Business); p. 115.

Notice that about one third is connected with hedging of risks of changes in demand. On the other hand, small factories accept such orders in spite of a low return because they cannot stand on their own feet. Lack of financial strength, inaccessibility of markets for materials and lack of direct sales outlets are the main reasons why small engineering shops cannot get along without accepting this kind of sub-contracting work. In general, the smaller the factory the greater the dependence
(41)
on sub-contract orders.

(41) The following tables prepared by Professor Komiyama show this very clearly.

Scale	Manu- facture only (A)	Pro- cessing only (B)	Manu- facture and Pro- cessing	Repairs	Total (C)	(A) (C)	(B) (C)
Workers							
1-4	21	40	3	1	65	32.3%	61.5%
5-9	74	73	11	1	159	46.5	46.0
10-14	25	7	2	-	35	71.4	20.0
15-29	39	14	1	1	55	70.8	25.4
30-49	11	1	3	-	15	76.7	6.6
50-99	3	-	-	-	3	-	-
Over 100	4	-	-	-	4	-	-

In small workshops employing less than 10 persons dependence on sub-contracting is particularly striking. The following figures refer to such small plants in the engineering industry in 1936.

As has already been mentioned, the factories which accept sub-contract work vary in size, equipment and so on according to their position in the pyramidal structure of the sub-contracting system itself. Those which accept orders for whole parts or sub-assemblies, or even for complete products direct from a large engineering concern, may employ two or three hundred persons and possess a modern well-equipped plant. It is not the internal condition of these factories so much as their position of dependence which is important here. These larger factories usually have a number of sources of orders - at least 20 - and their dependence on any one source is correspondingly small.

(41) (Contd.)

Type of work	No. of Factories	%
Production for market only	17	5.4
Partly production for market	9	2.9
Production to order only	92	29.5
Partly production to order	17	5.4
Sub-contracting only	136	43.6
Partly sub-contracting	41	13.1
Total	312	100.0

See Komiyama, "Nihon Chusho Kogyo Kenkyu" (A Study of Japanese Medium and Small Scale Industry); pp. 64-5.

Towards the base of the pyramid where the scale of operations is small, the degree of dependence is correspondingly more marked. The smallest sub-contracting workshops (under 10 employees) seldom have more than three sources of orders and many depend on one only. The type of work which these small workshops can perform is severely limited by the nature of their equipment. The smallest possess only one or two general purpose lathes and perhaps a power drill. The larger the workshop the more varied the equipment but, as Table 16 shows, plants employing fewer than 30 workers can scarcely do more than rough machining.

(42)

Table 16 - Equipment of sub-contracting Factories
by Scale (1936)

	1-4	5	6-9	10-14	15-29
Lathes	2.0	2.6	6.0	8.0	8.4
Drills	0.9	0.8	1.5	2.0	2.0
Shapers	0.06	0.4	0.9	0.3	1.0
Millers	0.2	0.8	1.6	2.5	1.4
Grinders	0.2	?	?	?	0.4
Motors	1.0	1.0	1.0	1.0	1.4
Horse power used	1.1	1.8	2.1	2.0	7.2

(42) Komiyama, op. cit. p. 76.

A large proportion of the work put out is in fact rough machining and casting, and this work goes to the smaller factories.
(43)

Labour as well as equipment is of poor quality but improves as the sub-contractor becomes larger. The master himself is usually a skilled machine operator who has perhaps spent many years as a foreman in a large factory. In very small plants (1-4 workers), therefore, the proportion of skilled workmen is comparatively high. In general, however, this proportion rises with the size of the plant.

(44)

Table 17 - Percentage of Skilled Workers by Scale of Factory

1 - 4	40%
5 - 9	29
10 - 14	27
15 - 29	33
30 - 49	43
50 - 99	49

As many as 40% of the employees of small engineering workshops are apprentices. These apprentices receive training as machine operators, turners and fitters

(43) In 1950 32% of all work put out in this way was rough machining and 18% was casting. See Chusho Kigyo Cho (Bureau of Medium and Small Business) "Chusho Kigyo no Ichi to Mondaiten" (The Position and Problems of Medium and Small Business); p. 105.

(44) Komiyama, op. cit. p. 90.

and often live with their employer. The normal period of apprenticeship is five years, and the apprentice normally leaves his master after six or seven. Although the system has many features of the old style handicraft apprenticeship, it has at the same time many of the worst features of sweated labour. The apprentice's wages are very low, even though an apprentice of one or two years' standing may do nearly as much work as a fully trained man. As a source of cheap labour, the apprentice system is almost indispensable to small engineering workshops.

The relationship between the sub-contractor and the source of orders varies considerably according to the relative size of the two parties. The larger the concern which puts out orders, the larger and the more numerous are its sub-contractors likely to be. The relationship between a parent firm and a sub-contractor usually starts through some personal connection. Sometimes the sub-contractor himself is a former employee of the firm on which he depends for orders. More frequently he is introduced by a friend who already has a connection with the large factory in question. Once the connection is made, the sub-contractor must normally take whatever terms the parent factory offers, as the loss of a steady source of orders might be ruinous to a small workshop.

Since most of the work of sub-contractors, particularly the smaller ones, consists of machining and other processing work, materials are normally provided with the order. Practically all work done by workshops employing fewer than 10 persons is done on materials provided by the source of orders. Larger sub-contractors, producing complete parts or sub-assemblies, may sometimes provide their own materials. Where the connection between the parent factory and the sub-contractor is close, and particularly where the sub-contractor works exclusively for one large factory, the parent factory may extend financial and technical aid. This may take the form of supplying initial capital to set a man up in business as a sub-contractor. For example, an employee who has been in a large factory for many years and who reaches the age of retirement may receive, in lieu of a retirement allowance, an old lathe or two and a set of tools and even a small factory building in which he can continue to work for the company, not as an employee but as a sub-contractor. Alternatively the large factory may sell old equipment to sub-contractors on time payment. Financial assistance in the form of operating capital also is sometimes provided by the parent firm, particularly to smaller sub-contractors. Table 18 gives some figures for the incidence of these kinds of relationships according to industry.

(45)

Table 18 - Relationship between Parent Factory and Sub-contractors

	Mechan- ical Engin- eering	Elec- trical Engin- eering	Transport Engin- eering	Precision Engin- eering	Averag
Material supplied	50.1	47.0	38.2	42.8	43.3
Financial Assistance	13.6	15.8	13.0	10.6	13.7
Technical Guidance	34.9	35.3	24.5	28.8	29.9
Equipment lent or sold	8.5	12.2	8.7	19.2	9.9
Capital invested	4.2	0.7	1.7	0	2.0
Personal Connection	8.3	8.8	5.7	10.3	7.3

In practice most of this kind of assistance is confined to sub-contractors, usually of medium rather than very small scale, who work for one parent factory only.

(46)

These "attached" sub-contractors are practically branches

(45) Compiled by the Kokumin Keizai Kenkyu Kai (National Economic Research Association) 1950. Quoted from Chusho Kigyo Cho (Bureau of Medium and Small Business) "Chusho Kigyo no Ichi to Mondaiten" (The Position and Problems of Medium and Small Business); p. 112.

(46) Senzoku Shitauke Kojo.

of the parent factory. This type of special attachment to a single source of orders became common with the development of the war organisation of industry from about 1937 or 1938 on, and was actively encouraged as part of the general plan for the war effort. Sub-contracting played a large part in the plan for the mobilisation of the engineering industry in three main ways. Sub-contracting from large civilian factories to medium and small factories in the cities increased in importance and became regularised into a definite system of control. Military and naval arsenals and munitions plants put out an increasing volume of work direct to medium and small factories through channels of control established for the purpose. Finally a scheme was evolved whereby small engineering workshops in rural areas were organised through local government authorities to accept work of a military nature, at first as a relief measure, and later as part of the plan for the total mobilisation of industry. These three wartime developments will be discussed in greater detail in the following chapter.

What is the basis of the control which large factories are able to exercise over their sub-contractors? Supply of materials, financial and technical assistance were once supposed to be the levers by which this control was maintained, but if this was ever true it can hardly be so now. Now that the supply of raw materials is no longer

controlled as it was under the war economy, small, and particularly medium sized plants have free access to markets for materials. Far from receiving financial assistance, small sub-contractors now have great difficulty in getting paid for their work within a reasonable time. Whereas payments made by small plants are primarily in cash, the payments which they receive from the larger factories are largely in the form of 60 day or even 90 day bills. Thus, so far are the sub-contractors from receiving any financial assistance from the large concerns, that they are, in the aggregate, net creditors of big business.

Technical inferiority is still a major reason for the dependence of small engineering plants. The smallest workshops do not possess equipment capable of more than simple processing work and therefore cannot operate independently. This does not always apply, however, to larger sub-contractors employing 200 persons or more. The basis of the sub-contracting relationship has sometimes been sought in the theory of optimum scale and division of labour. Economies are said to result from the splitting off of processes which cannot be performed at the optimum scale in a single plant. This does not go far to explain conditions in Japan. If the optimum scale for a certain process is so large that a large factory cannot reach it, the plant required will be large enough

to occupy an independent position in the industry even as a separate firm. On the other hand, if the optimum scale is small, duplication or multiplication of the optimum plant within the large factory itself is unlikely to result in serious diseconomies.

The basis of the parent factory - sub-contractor relationship is rather to be found in the general economic environment, and in the absolute difference in background and in financial and industrial strength of the two parties. The dependent position of medium and small scale industry is to be understood against the background of the historical development of the Japanese economy and particularly in the context of the backwardness of industrial capital formation in Japan.

Chapter IVMedium and Small Scale Industry
in the War Economy and after(1) The transition to the war economy

(1) The controlled economy, or the "Quasi-war economy" as it was generally known in Japan, is regarded as having got under way after the incident of February (2) 1936. The emergence of the quasi-war economy was preceded, however, by a period of preparation which may be said to have started roughly around 1930. Three major trends are (3) relevant to the formation of the controlled economy.

First was the general climate of the international economy. By 1930 or 1931, internal distress, balance of payments difficulties and monetary confusion were prompting a number of countries to adopt measures of control to safeguard their economies' international position. A feeling arose that national income and the level of employment were too important to be left to the operation

(1) Jun-senji Keizai.

(2) 26th February 1936, in which the Minister of Finance and others were murdered.

(3) See also in this connection Yamanaka, "Chusho Kogyo no Honshitsu to Tenkai" (The Nature and Development of Medium and Small Industry), Chapter 7.

of what was by that time regarded as the very uncertain compensatory mechanism of neo-classical theory. With the general abandonment of the gold standard it became clear that some system of "artificial" controls would be necessary to replace the "automatic" adjustments of the old system. In the broadest terms, the experiences of the world-wide depression of 1929-30 aroused a greater sense of responsibility for the maintenance of internal prosperity and at the same time created a feeling that this should be attempted by greater regulation of economic life by the state.

Secondly, conditions in Japan itself pointed to increased government regulation of economic life. Although in the years between the first World War and the great depression, a tentative experiment in economic liberalism had been made. Japan had a long tradition of authoritarian control, not only in economic life but in every sphere of activity. The succession of crises during the 1920's, culminating in the great financial panic of 1927 and the world depression of 1929-30, did much to discredit economic liberalism in Japan. The lopsided development of the economy and the increasing concentration of economic power in the hands of a few financial combines (the Zaibatsu) gave weight to the view that some regulation was necessary. By 1930, distress in the rural districts of

Japan was widespread. The collapse of the American market for raw silk had very serious consequences for large numbers of farmers for whom sericulture had been a most important source of income. The situation seemed to call for more active measures than the orthodox financial policy of Inoue Junnosuke, Minister of Finance (4) in the Hamaguchi cabinet of 1931, who, in the name of "Rationalisation" was exposing Japanese business to strains which it was scarcely able to bear.

At this point the third main factor in the trend towards the controlled economy became very important. This was the increasing influence of a section of the Japanese army. Impressed with the effects of prolonged depression in Japan, particularly among the rural population, this group saw little hope of relief from the policies of political parties dominated by large financial combines. At the same time the increasingly high tariff walls which were being erected against Japanese goods, and the example of the Ottawa Agreement by which the British Commonwealth was seeking to establish some kind of working system of international trade within its own sphere of

(4) Hamaguchi himself was succeeded as Prime Minister by Wakatsuki in 1931.

influence convinced the military faction that Japan's aim should be to gain control of a similar economic block on the Asiatic mainland. In September 1931 they forced the hand of the Minseito government by provoking the incident which started open hostilities with China for the control of Manchuria. The Wakatsuki cabinet resigned in December, and a new cabinet took office with Takahashi Korekiyo as Minister of Finance. Almost immediately Japan again left the gold standard and the new Minister of Finance embarked upon a policy of reflation which continued with only a short interruption until the military finally gained control in the coup of 1936.

Over this period the expenditure of the central government on general account rose from 1477 million yen in the financial year 1931-32 to 2282 million yen in 1936-37.⁽⁵⁾ Total government indebtedness, which stood at 6,187 million yen in March 1931, rose to 10,575 million yen in March 1936.⁽⁶⁾ The increase was spent primarily on military expansion and the armament industries, and secondarily on relief measures. Military expenditure rose from 454 million yen (31% of total expenditure) in 1931

(5) Ministry of Finance, Bank of Japan, "Zaisei Keizai Tokei Nempo" (Yearbook of Public Finance Statistics) 1948.

(6) Ibid. p. 210.

to 1,078 million yen (47.2% of total expenditure) in 1936.⁽⁷⁾

One result of this expansionist budgetary policy was to raise industrial employment from 1.66 million in 1931 to 2.59 million in 1936. The increase was heavily concentrated in engineering and heavy industry.⁽⁸⁾

⁽⁹⁾
This "Emergency Finance" had its effect in raising the level of activity and in promoting exports, but at the same time it introduced a strong element of control, and, through the expansion of the armed forces and the munitions industry, prepared the ground for more active control of public life by the military.

Of particular relevance to this study was the formation of a new attitude to industry, and in particular to medium and small scale industry. By 1930 official circles in Japan took the view that industrial policy should be directed not, as formerly, to smoothing the way for the

(7) Ibid. p. 35.

(8) The figures are from the Ministry of Trade and Industry' Factory Statistics, and are quoted from Kajinishi et al. "Nihon ni okeru Shihon Shugi no Hattatsu" (The Development of Capitalism in Japan), Vol. I, p. 250. It is interesting to note in this connection that in spite of this increase in employment real wages fell steadily over the period. (See Allen, op. cit., p. 183)

(9) Hijoji Zaisei.

natural evolution of Japanese industry along classical lines, but to solving the problem of its adjustment to life in an economic environment characterised by imperfect competition and monopoly capitalism. This change in outlook affected the official attitude to both large scale monopoly capital and to medium and small scale industry. The organisation of large scale industry into cartels for collective security and the maintenance of its position in world markets was actively encouraged. Small scale industry policy changed from concentration on relief measures over a period in which it might be expected to disappear, to positive measures for organisation and control based on a recognition of its place in the economy.

Two agencies were set up in 1930 to carry out the new policy. Under the Law for the Control of Essential
(10)
Industry large scale industry was urged to organise "to safeguard the fair profit of the industry in question with a view to the healthy development of the national economy." In fact large scale industry needed no encouragement and very little action was ever taken under this law. Medium and small scale industry, on the other hand, was entirely incapable of autonomous cartel-like action, in view of its fiercely competitive nature and of the very

(10) Juyo Sangyo Tosei Ho.

large numbers involved. The Emergency Bureau of
 (11)
 Industrial Rationalisation established in June 1930
 was designed to organise medium and small scale industry
 from above. The need for organisation was summarised by
 Takeuchi Kakichi, head of the Industrial Bureau of the
 Ministry of Trade and Industry, as follows :

"In the first place is the fact that
 their production equipment is incomplete because
 they lack sufficient capital. Then, secondly, they
 are comparatively slow in technical improvement and
 progress. Whereas large scale factories (can carry
 out research and keep up with the latest development
 abroad) this cannot be expected from medium and
 small scale industry. They are always liable to
 fall behind in technique. Thirdly there is practi-
 cally no control amongst producers in the same
 industry, and they are thus likely to degenerate
 into unreasonable competition. Consequently, being
 caught up in a competitive environment they themselves
 force prices down. The national policy must be to
 remedy these three failings and to make their
 operations profitable by recognising the existence
 of medium and small scale manufacturers as such both
 (12)
 from an industrial and a national point of view."

(11) Rinji Sangyo Gori Kyoku.

(12) "Zaisei Keizai Jiho" (Bulletin of Public Finance)
 August 1934. Quoted from Takahashi Kamekichi,

By 1936 medium and small scale industry was thought of not as a blot on the industrial landscape, but in terms of the contribution which, if properly organised and controlled, it could make both to the export drive and as an integral part of the expansion of the munitions and engineering industries. The first attempts at control were made through existing institutions. After the outbreak of the Pacific War control was exercised through new organisations known as Control Associations and Control Councils. As full employment was approached - possibly for the only time in Japan's history - the problems of control became increasingly difficult, and by the end of the war conditions aggravated by Allied bombing, had become very confused. Not the least of the problems which faced the Japanese planners were those of the role of medium and small scale industry and of its integration in the war organisation of industry.

(ii) The Quasi-war Economy - The use of existing organisations

Associations of medium and small scale producers have a long history in Japan. The first such association was set up in 1886 to control the quality of

(12) (Contd.)

"Gendai Chusho Shokogyo Ron" (Modern Medium and Small Scale Trade and Industry), Tokyo 1936; p. 39.

raw silk for export and a similar organisation was formed for the tea industry in 1887. The system was extended under the Law for Major Export Industry Associations of (13) 1897, which was amended and further extended to cover other than export industries by the Law for Major Industrial (14) Associations of 1900. These associations were designed for control of marketing and quality. They were voluntary and were forbidden to engage in restrictive practice such as price and production control.

After the first World War an element of co- (15) operative organisation was introduced under a law of 1925, which was intended to help medium and small scale export industries through the post-war depression. These associations too were voluntary and were rather unsuccessful. Few important export producers joined and by 1930 there were only 13 of them in existence.

In 1931 this system was again amended by the (16) Law for Industrial Associations which again extended the scope of the system to cover any industry whether export

(13) Juyo Yushutsu-hin Dogyo Kumiai Ho.

(14) Juyo Bussan Dogyo Kumiai Ho.

(15) Juyo Yushutsu-hin Kogyo Kumiai Ho.

(16) Kogyo Kumiai Ho.

or not, and also widened the sphere of operations in which such associations might engage. Moreover, whereas agreements to control price and production had been expressly forbidden under the earlier laws, the Minister of Trade and Industry, Mr. Tawara, introduced, in March 1931, proposals to relax these restrictions. As a result the law was amended to permit price and production control. In practice, however, the industrial associations seldom achieved any control of this kind. Although in theory the associations could engage in a wide range of activities, (17) in practice they seldom did more than make some attempt at quality control, and occasionally engaged in co-operative buying of materials.

It was these industrial associations (Kogyo Kumiai) which formed the basic unit of the system of industrial control during the period of the quasi-war economy which extended roughly from the outbreak of the

(17) These included inspection of raw materials and equipment; specification of materials; regulation of production; price agreements; installation and operation of co-operative equipment; co-operative warehousing, processing and buying; lending of machinery to members and technical assistance and research. See Takahashi, op. cit.; p. 190.

China Incident in July 1937 to the outbreak of the
 Pacific War in December 1941. The necessity for control
 and the aims of government policy were succinctly stated
 in the "Three principles of economic policy" propounded
 by Kaya Okinobu on taking office as Minister of Finance
 in the Konoye cabinet of June 1937. These were firstly,
 "to take concrete measures for the expansion of productive
 capacity;", secondly, "to take measures to maintain the
 balance of international payments;" and, thirdly, "to
 estimate supply of and demand for commodities and to take
 steps to bring these into adjustment".

The programme for the "expansion of productive
 capacity" called for concentration of investment, financial
 accommodation and allocation of scarce raw materials in the
 munitions and producer goods industries, and a corresponding

(18) These Kogyo Kumiai increased rapidly in numbers when
 they became the official channels of control. The
 following figures are given by Isobe Kiichi in
 "Chusho Kogyo Tosei Soshiki" (The Organisation
 for Control of Medium and Small Scale Industry),
 Tokyo, 1942; p. 46.

1934	513	associations
1935	662	
1936	850	
1937	1,173	
1938	2,836	
1939	4,417	
1940	6,580	
1941	8,560	

reduction in the resources available for home consumption industries. Since these latter were primarily composed of medium and small scale industry, small producers found increasing difficulty in continuing operations. The maintenance of the balance of international payments also involved increasing restrictions on the operation of small plants in particular. Although export production was encouraged, this was offset by the restriction of imports almost entirely to strategic materials. In this connection the attempt to maintain the value of the yen by pegging Japan's cost structure, which was by then beginning to feel the strain of heavy deficit financing, resulted in a cumbersome system of price control and rationing.

The rationing of scarce materials and the adjustment of supply and demand by rationing and price control were carried out through the industrial association and their federations which became organs of government control rather than the voluntary associations of producers which they had originally been.

(19) The experience of the rubber products industry illustrates the change in the function of the industrial associations. The first industrial association in the industry was formed in 1927 by small scale producers in Kobe under the Major Exports Industrial Associations Law of 1925. Others were established under the revised law of 1931 and a Federation was formed in October 1931. Its objects were control of quality,

The already extensive limitations on the use of scarce materials were extended to cover the whole (20) economy by the National Total Mobilisation Law, which

(19) (Contd.)

promotion of sales, some co-operative operations and the general promotion of the welfare of the industry by combination and co-operative action.

By 1940 the Federation had as its members 13 regional industrial associations, 4 large scale producers as individual members, and the Japan Motor Tyre Industrial Association. With the outbreak of the Manchurian Incident, the Federation was appointed as the agency for the allocation of raw rubber and concentrated on this rather than on market control. Under the Rubber Rationing Control Regulations of July 1938, the Federation was given the task of administering, through its member associations, three separate systems of rationing for munitions production, exports (link system) and civilian goods.

In January 1941, under government pressure, the Federation set up a committee to consider "enterprise re-adjustment" as a result of which the number of producers was reduced (on paper, at any rate) from 1300 to about 400.

Note the gradual change from the independent, self-governing, voluntary structure of the Japan Federation of Rubber Industrial Associations before the Manchurian Incident, to the compulsory, state-controlled organisation for the regulation of production, distribution and exports into which it had developed by 1941 or 1942.

See Takiya and Fujii, "Waga Kuni Gomu Kogyo no Yushutsu Shincho-ryoku" (Capacity for Export Expansion in the Japanese Rubber Industry) in "Kokumin Keizai Zasshi" (Journal of National Economy) Vol. 67, Nos. 2 and 3; and Isobe Kiichi, "Chusho Kogyo Tosei Soshiki" (The Organisation for Control of Medium and Small Scale Industry), pp.261-31

(20) Kokka So-doin Ho. The Plan for the Mobilisation of Resources (Busshi Doin Keikaku) specified 32 materials affecting practically every kind of industry and small scale industry in particular.

came into operation in May 1938. During 1938 and 1939 the government poured forth a stream of laws and administrative orders designed to re-deploy the total productive capacity of the country in the interests of military expansion.

The cuts in home consumption vitally affected medium and small scale industry which produced largely for the home consumption market. With the outbreak of the second World War in September 1939 small plants producing for export also found their markets greatly restricted. The re-deployment of Japanese industry did not proceed smoothly, but resulted in severe frictional and structural unemployment amongst producers in non-essential industry, of which almost all were medium and small scale plants. In 1938 estimates of unemployment caused in this way were as high as a million, but in November that year the government estimated the figure at about 374,000 persons, of whom 88,000 were persons in business on their own account. Of these only 22,000 found re-employment, and a good number solved their employment problem simply by returning to their family agricultural holding, where, although no longer listed as unemployed, they added to

(21)
disguised rural unemployment. The 1939 Plan for the
Mobilisation of Resources intensified the distress among
(22)
small producers.

Workmen found re-employment more easily than small proprietors, who, as well as finding employment for themselves, had to dispose in some way of whatever capital equipment they possessed. Small factory owners were urged to adopt one of three courses. They could accept orders or sub-contract work from government agencies or military arsenals. Technical standards for this class of work were high, and few small factories possessed the equipment and technique required. For this reason it was proposed that redundant small factories should pool their equipment and perform such work on a co-operative basis. If, for technical or other reasons, military sub-contracts were not available, small factory owners were urged to transfer

(21) These figures are from Mori Kiichi, "Sai-hensei Katei no Nihon Chusho Sangyo" (Japanese Medium and Small Scale Industry in the Process of Re-organisation), Tokyo, 1941; pp. 42-43.

(22) Industries particularly affected were forging, sheet metal products, knitted goods, shoes, cotton dyeing and finishing, machine and tool manufacture, leather goods, casting, silk doubling, religious ornaments, metal toys, velvet, the garment industry, metal plating and tailoring. See Mori Kiichi, op. cit.; p. 42.

to industries which did not require scarce materials. Although the government provided technical assistance for this kind of transfer, technical problems were again considerable. On the whole, only a limited number of small plants was re-absorbed in these ways, and the problem of re-employment, from the point of view both of production and of relief, became more and more pressing.

Up to the outbreak of the Pacific War the emphasis was on the relief aspect of the problem. This was especially so in rural areas, where what was known as the Rural Controlled Industry System was in operation. Under this system, government arsenals and shipyards put out simple work to small plants in rural areas. Large private firms were encouraged to do the same but at first very few did. The object was primarily rural relief. As (23) the Ministry of Agriculture and Forestry stated :-

"The main point is to relieve rural distress caused by the population problem, by diverting excess labour in rural villages to rural industry. Secondary objectives are to diversify the rural economy, to increase cash income and to relieve the pressure of industry on agriculture."

(23) Quoted from "Chugai Shogyo Shimpo" (Domestic and Foreign Trade News) 16th July 1934, by Takahashi in "Gendai Chusho Shokogyo Ron" (Modern Medium and Small Scale Trade and Industry); p. 70.

Later, as rural industry improved technically and some external economies of production became available, large city factories often found it profitable to take advantage of the sources of cheap labour available in this form. This was not the intention of the promoters of the scheme and one of them felt it necessary to remark : "When what is called the industrialisation of rural areas was first thought of, its object was mainly the relief of rural areas I would like to issue a word of warning against the principle that decentralisation of industry is for the benefit of industrialists rather than for the benefit of rural areas."⁽²⁴⁾

Orders were channelled through the local prefectural government to agricultural Production Association (Sangyo Kumiai) who accepted responsibility for the work. A similar system, under the control of the Ministry of Trade and Industry, was based on Industrial Associations (Kogyo Kumiai) in rural areas. The origin of this latter system was an arrangement between the Engineering Industrial Association of Kochi and the Kure naval arsenal made as early as 1934. The scheme was extended with the co-operation of the prefectural authorities, but its success was limited by the low technical standard of the rural

(24) Ibid.; p. 144.

workshops. Some economies were achieved by division of labour among the members of the Industrial Associations, by the use of limit gauges supplied by the military authorities, and by co-operative production. The main interest of Rural Controlled Industry, however, is the fact that in its emphasis on control and collectivism it foreshadowed many features of a system of control later imposed over much of Japanese industry.

(iii) The Pacific War and the intensification of control

With the outbreak of the Pacific War, the war organisation of industry entered a new phase. All thought of any re-organisation of the economy through the operation of natural economic processes was entirely abandoned, and the mobilisation of Japanese industry was thenceforward carried out by direct government action. Within a month of the attack on Pearl Harbour a large section of Japanese industry had been organised in Control Associations (Tosei Kumiai) and Control Councils (Tosei Kai) which replaced the earlier organisations based on the Industrial Associations.⁽²⁵⁾

(25) The first Control Associations were designated in an order of 30th October 1941 and by January 1942 the new system had been introduced for steel, coal, steam engines, electric machinery, precision instruments, rolling stock, automobiles, cement, minerals, non-ferrous metal products, foreign trade and shipbuilding. See Isobe Kiichi, "Chusho Kogyo Tosei Soshiki" (The Organisation for Control of Medium and Small Scale Industry); p. 57.

The Control Councils were under the direct control of the government. The president of a Control Council was appointed by the relevant minister from a panel proposed by a committee whose members were also appointed by the minister. The other officials of the council were appointed by the president and the more important appointments required the approval of the minister. The officials of the Control Associations under a Control Council were again appointed by the president of the council concerned, and again the more important appointments were subject to ministerial approval. The actual producers themselves had very little say in the conduct of their industry's affairs.

Medium and small scale industry felt the impact of the Pacific War more keenly than any other section of Japanese industry. The large numbers involved, the low standard of technique and smallness of scale itself made it difficult to integrate medium and small scale industry into the war production programme. The official attitude to this problem varied. A "Plan for Establishing a New Economic Structure" published soon after the outbreak of the war stated "Medium and small scale industry is to be maintained and cultivated." By 1942, however, it was realised that large numbers of small plants would have to disappear in the process of re-

organisation. In March of that year the Information Bureau released an announcement "On the re-organisation of medium and small scale industry and the facilitation of changes of employment.", from which it was clear that many small businesses would be unable to carry on.

Medium and small scale industry was dealt with in two ways. Where it was considered capable of making a contribution to the war effort, the government sought to raise its efficiency by more closely integrated forms of industrial organisation. Small plants which were considered unable to make such a contribution were closed and their equipment either transferred to other uses or scrapped.

Plans for integration of medium and small scale industry in the war effort were based on development of the sub-contracting relationships. As early as December 1940, the Ministry of Trade and Industry produced a "Plan for the rationalisation of the engineering and steel products industries", which to some extent systematised sub-contracting by civilian factories. Large factories were urged to pick sub-contractors which conformed to their technical requirements, and to treat them as "attached" sub-contractors. The policy of closer co-operation between

(26) See above, p. 137.

parent factories and sub-contractors was carried a step further by the "Plan for carrying out a rationalisation of co-operating industry" published by the Machinery Bureau of the Ministry of Trade and Industry in November 1941. The term "co-operation" was substituted for "sub-contracting". A "Committee for designating co-operating factories" was set up in each association of parent factories to allocate sub-contractors to parent factories. These allocations required the approval of the Ministry of Trade and Industry, and preferential treatment was given to naval and military arsenals.

At the same time, the country was divided into eight districts, each under the control of a "Local Council for Co-operating Industry" composed of representatives of local government, the armed forces, parent factories, and sub-contractors, and assisted by technical advisers. By (27)

(27) The functions of these councils included :-

1. Allocation of orders so that they were, as far as possible, issued and accepted within the same district.
2. Regulation of the rate of utilisation of sub-contractors by large civilian factories.
3. Encouragement of a closer connection between parent factories and their sub-contractors.
4. Rationalisation of management and raising of technical standards among sub-contracting factories.
5. Financial aid for sub-contractors.

(Contd.)

March 1942, 3,275 "co-operating factories" had been approved by the Ministry of Trade and Industry under the plan.

As the Pacific War proceeded, sub-contracting became more and more subject to authoritarian control and less and less a matter for private negotiation and agreement. In particular it should be noted that in the process of "rationalisation" the Tonya to a large extent lost their function, and there was a pronounced trend away from the Tonya system and towards some form of direct attachment to large scale industrial capital. Although there were difficult problems of administration which often resulted in irritating anomalies, the system did achieve some increase in efficiency through rationalisation. Many of its better features have been preserved with considerable success in the post-war sewing machine and bicycle industries.

What of those small plants which could not be fitted into the war production programme? We have already seen how considerable numbers were forced to cease operations:

(27) (Contd.)

6. Improvement of material allocation procedure.

(See Isobe, op. cit.; pp. 61-2)

(28) See above, pp. 139-144.

and find employment elsewhere before the outbreak of the Pacific War. Before 1941, these closures were caused by indirect pressure rather than by actual government direction. Early in 1941, however, the government introduced plans for increasing production by concentrating production in large well-equipped plants, and smaller plants were forced to discontinue operations as separate establishments. In the first year of the war this process of "Enterprise re-adjustment", as it was called, reduced the number of factories employing five or more workers by about 10,000, of which almost all (9,874) were of the (29) 5-30 employee size groups. The tendering for enterprise re-adjustment to be applied mainly to medium and small scale industry was clear even in the first year of the war. This was, of course, to be expected, in view of the high proportion of small plants in consumption and export industries, and of their low standard of technique.

During the spring and summer of 1943 a "Basic plan to strengthen the war effort through enterprise re-adjustment" was prepared by the ministries concerned and

(29) Over half of these factories were in the textile industry, and about a quarter were from either the ceramics or timber industry. See Yamanaka (ed.), "Chusho Kogyo no Sho-mondai" (Problems of Medium and Small Scale Industry), Tokyo, 1948; pp. 52-3.

became law in June of that year. Under this plan all Japanese enterprises were divided into three categories - civilian industry, war industry and other industry. The second category was to be built up at the expense of the first, leaving the third more or less as it was. Within a year 127,000 factories (nearly all small) had been closed and 250,000 tons of their equipment had been collected for scrap. It is very doubtful whether the contribution which this "re-adjustment" made to the war effort was worth the dislocation of civilian production involved and the shock inflicted on industry as a whole.

During 1944 further plans were made for the re-organisation of sub-contracting in Category II (war production). Before these got past the paper stage, however, the dislocation of production caused by Allied bombing was already breaking down even the existing organisation.

By the end of the Pacific War, Japanese industry had suffered severely, and medium and small scale industry most of all. If "enterprise re-adjustment" reduced the number of small establishments by about half, the remainder was further reduced by direct war damage, either by bombing or evacuation. No figures are available for the numbers of small plants destroyed in this way, but 10% does not seem an unreasonable figure.

The end of the war, then, saw medium and small scale industry considerably reduced in numbers. Even those which remained could scarcely maintain production under the chaotic conditions which by that time prevailed. The effect of the war was not, however, limited to this. As a result of the war organisation of industry, there was a definite swing away from various forms of the Tonya system and towards dependence on large scale industrial capital. At the same time sub-contractors tended to become more closely associated with parent factories.

In general, the period of the war economy, and of the quasi-war economy which preceded it, was characterised by a closer integration of "native" medium and small scale industry with "introduced" large scale industry. This integration can scarcely be regarded as the result of any natural process of adjustment. On the contrary, it was the result of direct government regulation, based on the exigencies of the war situation rather than on long term economic trends.

(iv) The post-war period

In the period immediately following the end of the war several factors combined to produce a situation exceptionally favourable to small scale industry. The

system of wartime controls broke down completely after the war and small business was free, temporarily at least, to obtain material and to sell its products in whatever way it wished. Although large scale industry was paralysed by lack of materials, labour and plant, a small workshop was often able to salvage enough material and piece together enough machinery to resume operations very quickly. Being less dependent on employed labour than the larger plants, the help of family and friends was usually sufficient to start producing something. Since the most pressing demand was for consumer goods, predominantly the products of small industry (large scale industry is more typically concerned with producer goods) small plants made large profits from the manufacture and sale of kitchen-ware, crockery and all types of household utensils. Finance was then no problem, since these products were so much in demand that the small workshops often received cash payment in advance. This state of affairs was greatly accentuated by the rather spectacular (30) inflation in the six months following the end of the war.

(30) From the end of July 1945 to July 1948 the legal retail price index (1930 = 100) as given by the Tokyo Chamber of Commerce and Industry rose 40-fold. (Cohen, "Japan's Economy in War and Reconstruction", Minneapolis, 1949; p. 447)

This inflation not only made for large profits but, by almost wiping out commercial capital, temporarily freed small business from its traditional dependence on Tonya, whose position had in any case already declined as a result of the wartime system of control. Even a year after the end of the war, production was only one-third of pre-war. The population had, of course, risen
(31)
considerably and the backlog of demand was enormous.

Thus in this chaotic period from the end of the war to the beginning of 1947 it was primarily small scale industry which filled this demand, since it was easier to re-start than large scale industry and its informal organisation made black-market operations much easier.

The feeling of optimism about the future of small business was strengthened at the time by the widely publicised programme for the "democratisation" of the Japanese economy. Two key points of this programme, or rather the threat of them, did something to retard the recovery of big business. One was the plan for breaking up the concentration of economic power in Japan, and in particular, the proposed dissolution of the well-known

(31) From 69 millions in 1934-36 to 83 millions in 1950 (Economic White Paper, 1951, published by the Economic Stabilisation Board).

Zaibatsu, or financial oligarchy. The other was the purge of top management who could be regarded either as working for the perpetuation of the concentration of economic power, or as guilty of militaristic conduct during the war.

In November 1945, a Holding Companies Liquidation Commission was formed to take over the affairs of Zaibatsu holding companies pending liquidation of their assets. By 1948, 83 holding companies had been designated for this treatment and the operation of about 4,500 of their subsidiary companies was restricted. As to personnel, by 1948 some 4,000 business executives had been removed from positions of influence. Neither of these measures can be said materially to have altered the structure of Japanese industry or of industrial capital. Neither was the capital levy of 1946 of great effect in this regard, though it might have had some anti-inflationary effect. (32)

Had there been any considerable industrial capital outside these large concentrations and their subsidiaries, these policies might have been more effective in redressing the balance of economic power. In fact, however, the formation of industrial capital was practically

(32) On these points see Cohen, op. cit., pp. 427-436, and T.A. Bisson, "The Economic Purge in Japan". Far Eastern Quarterly, Vol. XII, No. 3, p. 279.

limited, through the historical process described above, to the sphere of large scale enterprise. In other words, nothing existed to counterbalance the influence of large scale industrial finance capital, however much it was weakened. Medium and small scale industry was still little more than sometimes mechanised, sometimes handcraft household production dependent either on commercial capital, or on large scale industry itself. In these circumstances, restrictions on the operation of large scale capital did not automatically produce any building of small scale industrial capital. In the initial post-war period the apparent prosperity of small business could hardly be other than temporary, since it was based on a temporary economic situation, and was due only to a very minor degree to the limitation of the operations of big business.

(v) The re-imposition of controls and priority production

By the second half of 1948 this temporary situation had largely disappeared. As soon as controls again became effective, as soon as inflation started to level off and large scale industry began to regain its feet, it became apparent that small business had made no solid gains in business organisation or in the technical field. With the instalment of the Yoshida Cabinet in October 1948 and the changed attitude of the occupation authorities, emphasis shifted to increased production and controls in

the interests of economic stabilisation. The changed situation was summarised by the "Oriental Economist". "During the hectic period following the war's termination when supplies were scarce, even articles of inferior quality found their way to consumers who could get nothing else. With society and industry returning to normal, however, the principle of the survival of the fittest will (33) come to prevail in the world of commerce."

It was soon made clear who were to be considered "the fittest". The programme for "Excessive Economic Power Deconcentration", as it was called, was modified so as to leave most large businesses intact. The most important development for small business was the intensified application of the "Priority Production" formula initiated in March 1947. "Priority Production" was interpreted to mean the concentration of financial accommodation and allocations of scarce materials to "key" industries where they would do most good in the rehabilitation of the economy. Since these key industries almost without exception turned out to be large scale enterprises, this was a serious blow to small scale industry. Although

(33) 6th November, 1948.

the Japanese government of the time was possibly not entirely disinterested in the matter of preferential treatment for big business, there was much to be said for the plan, since, as we saw above, large scale industry was, in fact, the key to the Japanese economy. By this programme the grip of big business on the Japanese economy which had been relaxed just after the war, was firmly tightened. Raw materials, particularly iron, steel, copper and other metals, coal, coke and electric power were allocated in such a way that it was difficult to obtain supplies except through large scale industry. The situation was strongly reminiscent of the early days of the China Incident. The government kept the price of these allocated materials at a comparatively low figure, while the "free", or black-market price was very much higher. Any small plants requiring these materials were, therefore, forced either to work to the orders of a large scale parent factory, or to pay high prices for black-market materials. Since product prices were controlled and the free price of materials was soaring, profitable production became extremely difficult. The majority of small enterprises soon found themselves in financial difficulties. Here again, they were at a disadvantage, since the predominantly large scale "key" industries received priority as regards

(34)

financial accommodation also. To aggravate the condition of small business even further, a number of large concerns formerly engaged in war production, turned, as they recovered, to the production of civilian consumption goods, thus widening the area of competition with medium and small scale industry.

By the second half of 1948, then, small business was in a desperate position. This was reflected in the comparative wage rates paid in large and small business. Up to August 1947 small business paid higher wages than large scale industry. A year later large scale industry was starting to close the gap, and by September 1948 had a wage-level definitely higher than that of small
(35)
business.

By this time the government was beginning to show some concern for the position of small business and in August 1948 the "Bureau of Medium and Small Business" was set up to study and alleviate their condition. Since the operations of this bureau appeared to be doing little to improve their position and since small manufacturers

(34) See "New Priority Order", *Oriental Economist*, 11th December 1948; p. 1060.

(35) According to wage statistics published by the Osaka Chamber of Commerce and Industry, 1949.

considered their plight largely due to governmental economic policy, it was perhaps not unnatural that they should doubt the sincerity of government-sponsored plans for their assistance, and the bureau was referred to privately as the "Bureau of Medium and Small Business (36) Liquidation". Whatever the government's real sympathies, it should be pointed out that the personnel of this bureau, which included some eminent economists, did, and continues to do, a thoroughly conscientious job.

If the situation of small business was bad in 1948, the implementation in the spring of 1949 of the programme of economic stabilisation associated with the name of Mr. Joseph M. Dodge came as a further blow. Few would now deny that this "Nine-Point Economic Programme" of drastically disinflationary budgetary and credit policy strengthened by direct economic controls was an essential step in Japan's recovery. Opposition among Japanese business

(36) The law establishing this bureau contains the sentence, "It is considered that small, efficient, independent enterprises will serve as a bulwark against concentrations of economic power and provide opportunity for the industrious to follow the legitimate callings of their choice." This either displays an astonishing lack of understanding of the nature of the problem involved, or is open to a suspicion of disingenuousness.

circles at the time, however, was clamorous, and the effect on small business was disturbing. The government Economic White Paper of March 1949 stated, "There is a danger that the various anomalies and strains incident to the intensification of the economic stability policy centred on rationalisation of business, the balancing of government income and expenditure and the promotion of exports will be loaded on to rural areas and medium and small business."

This prognosis was largely borne out in fact, and it was small business which was hit hardest by the stabilisation programme. Although there was a general decline in employment, employment in the smaller plants (employing less than 200 workers) declined relatively twice as much as in the larger establishments. Medium-sized plants (50-100 employees) appear to have fared worst, but the smallest workshops were able to survive only by reducing their standards of living. ⁽³⁷⁾ The number of very small plants actually increased, since with the general financial stringency and increased unemployment some displaced workers started back-yard operations in their own homes, since low capital requirements make for easy entry.

(37) According to employment figures for 1949, issued by the Ministry of Labour and quoted in Chusho Kigyo Cho (Bureau of Medium and Small Business) "Chusho Kigyo no Ichi to Mondaiten" (The Position and Problems of Medium and Small Business); p. 64.

The burden of stabilisation financing was further thrust on to small business by widespread delays in payments by large parent factories to their small sub-⁽³⁸⁾contractors. This delay in payment appeared to be a deliberate policy on the part of big business who, since they had easier access to finance, might have been expected to have been in a position to pay promptly. In fact, however, big business was enjoying an interest free forced loan from small business, which in the aggregate must have reached a considerable figure.

Closely connected with the stabilisation programme was the fixing, in April 1949, of a single exchange rate of 360 yen to the dollar in place of the system of multiple rates which had been in force since the war. With the help of government assistance in various forms, large scale industry was still able to compete to some extent in world markets. Small scale industry, on the other hand, received a severe blow. The effective exchange rate for nearly all products of small industry had been well below

(38) See the figures published in "The Economic Bulletin Concerning the Status of Medium and Small Scale Factories in Osaka" (April 1949 - February 1950) p. 64, and in "Chusho Kigyo Kankei Tokai Shiryo Shu" (Collected Statistical Material on Medium and Small Business) prepared by the Bureau of Medium and Small Business, enlarged edition, February 1953; p. 199.

the figure fixed. Glass, celluloid and enamel products, (39) for example, had, according to one source, been exported at an exchange rate of 600 yen to the dollar; cameras, bicycles and rubber toys at over 500 yen to the dollar and, (40) according to the Oriental Economist, the average rate for the products of small scale industry was around 425 yen to the dollar. To export at the new rate therefore entailed a considerable sacrifice.

In face of all these difficulties and with the general fall in employment, small industry once again took on its pre-war aspect of a pool of excess industrial labour. This was accentuated by the decline in the position of that other great reservoir of surplus working population - agriculture. Like small industry, agriculture had enjoyed a rare period of prosperity just after the war. Like small businessmen, farmers too had hoped for great things from economic democracy - represented in their case by the land reform programme. Cultivating farmers did actually gain considerably from the redistribution of land, so far as it was carried out, but the gain was largely counteracted by the

(39) Nihon Keizai Tokuhon (Japanese Economics Reader) prepared by Toyo Keizai Shimpō Sha, rev. ed. Tokyo 1952; p. 230.

(40) "Outlook for Small Enterprises" 30th April 1949; p. 405.

heavy burden of taxation which they were called upon to bear. Like small business, also, agriculture found that economic stabilisation brought this short-lived prosperity to an end. The parallel serves to indicate the close relationship between the two, and the resemblance between the positions of small business and of agriculture in the Japanese economic structure.

By the outbreak of the Korean War in June 1950, small business had returned to its traditional role as a means for surplus labour to eke out a precarious livelihood, and as a buffer to cushion large scale industry against the shock of economic fluctuations. Since big business was again firmly in the saddle, the benefits of the Special Procurement Demands went almost entirely to the larger firms. Actually, profits from American military orders were not large as the military authorities drove a hard bargain. Nevertheless, Japanese industry was grateful for any increase in orders. Profit margins were, however, sometimes so low that large factories found it impossible to fill the orders from their own capacity and still make a profit. They therefore resorted to an old expedient of pushing the sacrifices on to small sub-contractors. Orders were often accepted in the first instance by a large firm and then sub-let to small plants willing to perform the work for any return which would yield even the most meagre livelihood.



In this way the larger firms were able to reap a moderate profit and the smaller were at least able to exist. (41)

Although the general level of activity rose somewhat as a result of the Korean War, there was no material improvement in the position of small business.

(vi) Present problems of small business

Although the problems of medium and small scale industry are, as we have seen, inherent in the structure of the economy, the small operators themselves usually attribute their difficulties to lack of facilities for obtaining finance. This attitude is, perhaps, understandable.

(41) This sub-letting of contracts is widely practised, particularly by large firms (usually Zaibatsu interests) which enjoy a virtual monopoly of Japanese government contracts in particular fields. The author's attention was drawn to a case in which a certain large firm sub-let a government contract for electrical equipment in this way. The large firm originally granted the contract took no part at all in the process of production but, by virtue of its special position, was able to reap a profit said to have amounted to 20% of the cost of production. The smaller sub-contractor who actually produced the goods had to be content with a profit of about 8%. Moreover, although under government regulations the government department concerned was bound to pay for the goods within one month of delivery, the smaller firm was forced to accept a 90-day bill as payment for the work done for the larger firm. This kind of exploitation of smaller firms by larger is extensively practised.

since in view of the primitive methods of accounting in use in such small plants, shortage of funds is usually the first indication that the business is not operating successfully. It is true that funds are not as readily available to small business as to large, but (quite apart from the government system of credit priorities) this is simply a natural reflection of the difference in credit standing. The lack of clear separation of business and household accounts in the smallest firms does not encourage prospective lenders. Moreover, since profits in the economic sense are practically non-existent in such small firms, prospective profits are not available as security against borrowings. The most the proprietor of a small plant can hope for is to make a livelihood - not a good asset from the point of view of the investor. On the other hand, specialised financial institutions have been established to provide finance in small amounts for small business. Even these must, however, set some credit standards if they are not to make heavy losses. Many small workshops have no credit, and if they get into financial difficulty should, theoretically, go out of business altogether. In their case, however, closure means not re-organisation but loss of livelihood and, on a large scale, would present a serious unemployment problem.

In fact, shortage of funds is far more often a symptom than a cause of the difficulties of small business. Technical and managerial backwardness is the most frequent cause of failure. The most glaring faults of management are in accounting and sales. In technique (42) small plants suffer from poor equipment which is only to some extent compensated for by the skill and judgment of the workers. Lack of precision equipment means that, in the field of engineering, at any rate, small plants must still confine themselves to rough machining, stamping and polishing. Very few small workshops possess the equipment to produce a complete finished product, saleable in an open market. Consequently, they must remain dependent on orders for simple processing work put out by a larger factory or by a Tonya. As the Japanese engineering industry turns more and more to precision products, and as precision production machinery is introduced in the larger plants, this technical disadvantage of small plants seems bound to become more pronounced.

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- (42) A survey made by Nagoya City in 1949 lists, in order, the following points as being most in need of attention. (i) Bookkeeping and cost accounting; (ii) Debt collection; (iii) Sales; (iv) Methods of raising capital; (v) Too great dependence on outside capital; (vi) Checking of customers' credit; (vii) Profit and loss analysis; (viii) Control of materials; (ix) Training of workmen; (x) Excessive labour cost; (xi) Unsuitable equipment.

The burden of taxation is another reason given for the difficulties of small establishments. Taken as a proportion of the value of sales the percentage taken in tax in 1949-50 was 17.9% in the case of an individual business employing one to four workers, as against only 3.5% for a company with between 100 and 200 employees. Since profit margins are much higher in the larger firms, the burden on the small workshops does seem excessive.⁽⁴³⁾ The income of the proprietor of a small workshop is, moreover, more in the nature of a wage, and a rather low one at that, than of a profit, and there seems to be some justification for complaints that the tax paid by such proprietors is far in excess of that paid by a wage labourer on a similar income.

In general, however, the source of the difficulties being experienced by small scale industry is to be found in its position in the economic structure as a whole. Small scale industry exists (as we have seen) in a passive and dependent capacity in an economy still largely controlled by large scale industrial and financial enterprises. It is in the nature of a reserve industrial army, with no power of initiative of its own, and dependent for

(43) This figure is to some extent offset by the fact that material cost is very often not included in the sales of small processing workshops, whereas it is included in the sales of larger plants.

its existence on factors external to its own ranks. In these circumstances it is scarcely surprising that small business (with agriculture) is forced to bear the brunt of Japan's economic difficulties.

The government has shown some concern over the difficulties of small business since the Pacific War. Nevertheless, in view of the statement by Mr. Ikeda in the Diet on 28th November, 1952 (he was Minister of Finance at the time) to the effect that it could not be helped if, in carrying out the government's economic policy a few small businessmen starved to death, it is rather difficult to know how seriously one should take government schemes for assisting small business. Nevertheless, the government has taken a number of steps to alleviate the condition of small business by providing credit facilities, technical assistance and business information, and by encouraging the formation of associations of small businessmen.

(44) As a result of this utterance, a motion of no confidence in the Minister of Finance was carried against the government and Mr. Ikeda resigned. This should not, however, necessarily be taken to mean that his views did not represent those of the government; since the motion was carried through a political manoeuvre on the part of the Hatoyama faction of the Liberal party, who abstained from voting.

In the field of credit the government has made available a small amount of the counterpart (a fund of local currency built up as a counterpart to American aid) for financing small business under the "Counterpart Fund Medium and Small Business Adjustment Finance System". City banks are being encouraged to lend to small enterprises through the "Bank of Japan Medium and Small Business Special Category System" under which a reduction in interest is extended by the Bank of Japan to city banks on account of money lent to small business. For smaller sums the "People's Finance Fund" has been set up to lend amounts of up to 100,000 yen (\$280) to very small businesses. A "Central Fund for Commercial and Industrial Associations" has been established which lends, not to individual firms, but to associations of small businessmen. The associations use the money as a reserve against which they guarantee the credit of members and accept cheques brought to them by their members. The government has also fostered the growth of credit associations, mutual finance firms and credit co-operative unions. These are, at present, the main source of funds for small business.

Assistance on technical and managerial problems is provided through a large number of "bureaux", "guidance centres" and "research stations" of which the most important is the Bureau of Medium and Small Business already referred to. Each large city has a guidance centre for small business on the lines of the Tokyo Guidance Centre for Medium and Small Scale Trade and Industry, and each prefectural administration runs a section dealing with the (45) affairs of small business. In addition, there are government research stations in areas specialising in a particular industry, such as that in Seki, Gifu Prefecture, which caters for the cutlery industry for which that locality is famous, and that in Hachioji near Tokyo which provides facilities for the town's textile industry. These research stations are not, as a rule, post-war creations, some of them having been founded as early as the end of the nineteenth century.

In view of the nature of the problem, measures such as these can scarcely be more than palliatives, since the difficulties of small business are due not to recent or superficial causes, but to the basic problem of the survival in a modern industrial economy of a sector of

(45) These are apart from the Medium and Small Business Consultation Centres of which there were 578 at the end of 1952, the majority being established by various local chambers of commerce and industry.

industry still bearing many marks of the peasant household industry from which it derives and in which the formation of industrial, as distinct from commercial capital has proceeded only to a very limited degree.

(vii) Small business associations

In this connection the encouragement of associations of small producers may hold more hopeful possibilities. The policy of encouraging or compelling associations of small producers for the regulation of unfair competition and the control of quality of products is not of recent origin. It appears in the "Principles of Industrial Associations" drawn up by the government in 1884. The pre-war and wartime associations of small manufacturers for purposes of government regulation have already been noticed. After the war similar organs of control were set up by the Commercial and Industrial Co-operative Associations Law of 1946. In line with the programme of economic democracy, however, the element of compulsion and control was removed and new associations formed under the Medium and Small Business Co-operative Associations Law of 1949. According to the Bureau of Medium and Small Business, these associations are not "for purposes of government control through the government or big business" but are to be "of the members, by the members, for the members".

(46)

These associations are of four types. The most common are associations of separate individual businesses, the great majority of which employ less than (47) ten workers. Such an association typically consists of 20 to 100 members. Co-operative buying and selling, research, advertising, acceptance or discounting of cheques and general intermediary work are their most common functions. About a quarter of such associations possess some equipment (a truck, a storehouse, or some processing machinery) on a co-operative basis. By the end of 1952 there were 17,683 of these associations, (48) mostly formed during 1950.

(46) Apart from two main types described here the Law of 1949 makes provision also for Credit Co-operative Associations (Shinyo Kyodo Kumi-ai, of which there were 326 at the end of 1952) and for Federations of Co-operative Associations (Kyodo Kumi-ai Reugokai of which there were 229 at the end of 1952).

(47) Known as "Jigyo Kyodo Kumi-ai"

(48) See "Chusho Kigyo Kankei Tokai Shiryo Shu" (Collected Statistical Material on Medium and Small Business) already referred to at p. 264.

Rather more interesting are those associations in which a number of small producers pool their resources and labour in a single enterprise⁽⁴⁹⁾. The resulting union is run more or less as a company in which the workers are the shareholders. The former independent masters receive a monthly wage from the association and, in addition, a dividend based on their capital contribution which probably took the form of equipment or buildings. Capitalists not themselves actively engaged in the enterprise are permitted to contribute capital up to a certain proportion⁽⁵⁰⁾ and receive a dividend. Workers who contribute no capital receive a regular wage only. The main objects of these associations are rationalisation of management, rationalisation of accounting, particularly for purposes of taxation, improvement of credit standing and the raising of efficiency and improvement of working conditions through pooling of labour and capital. There are now about 11,000 of these co-operative enterprises, mainly in those industries which require little capital investment. Few have more than 30 members and capital is usually in the region of 50,000 yen (\$140) per member. On the whole, such associations are working well.

(49) This form of association is known as "Kigyo Kumi-ai".

(50) This dividend is limited to 10%. Any profit in excess of this is distributed, to working members only, in proportion to the work done by them.

The former type of trade association of independent producers seems open to the objection that it may, at some future date, easily again be used as an instrument of government control. The latter type of co-operative enterprise, on its results to date, shows signs of being of substantial benefit to very small establishments.

What lessons can be learned from the experience of Japanese medium and small scale industry over the period of war and reconstruction since 1931? In the first place, small scale industry has shown surprising powers of survival under the most adverse conditions. Even the attempt to eradicate large sections of small business by force was found to be full of difficulties and was only very partially successful. In the second place, even given favourable conditions, medium and small scale industry has shown little sign of ability to develop into anything larger. Why is it that these small plants on the one hand continue to survive, and on the other hand remain small? In the final chapter an attempt is made to answer these questions on the basis of the historical and descriptive analysis which has already been presented.

Chapter V Conclusions

We have now outlined the development of medium and small scale industry in Japan, described the forms in which it is carried on, and given an account of its recent experience. In this final chapter an attempt is made to assess its economic basis in the Japanese economy : to enquire why it survives, why it remains small, and what are the effects of the existence of a large body of medium and small scale industry on the Japanese economy as a whole. Finally an attempt is made to assess long-term prospects.

(i) Why medium and small scale industry survives

Medium and small scale industry has shown a remarkable power of survival in Japan over a long period in which economic conditions have altered materially. Except under the extraordinary conditions created by war mobilisation and control, small plants have maintained their share of total industrial activity.

Several reasons underlying this power of survival have already been advanced and no single reason seems adequate. In general, the conditions for small industry's survival seem to fall under three headings. The first set of conditions is associated with the nature of markets for factors of production and for products. The second is associated with conditions of production both in

the small plants themselves and in Japanese large scale industry. The third set of survival conditions is to be sought in the relationships between medium and small scale industry and the rest of the economy, and in particular its relationship to large scale enterprise.

A number of conditions associated with factor and product markets have already been mentioned briefly. Of these the most fundamental are those connected with markets for the factors of production : labour, capital and entrepreneurial skill. Overall shortage of capital and abundance of labour, more than anything else, make for the survival of methods of production and forms of industrial organisation which do not require large scale investment in industrial plant. Economies of large scale production by capital-intensive methods are associated with systems where labour is treated as the scarce resource, and lose most of their significance in a country like Japan where labour is embarrassingly abundant. Arguments for capital investment based on increasing the productivity of labour lose much of their force in an economy in which it is capital which is the scarce factor of production. In such circumstances it is the productivity of capital which must be maintained and if possible raised. Given Japanese conditions of labour and capital supply, this is often best achieved by the thinly-spread use of simple labour-using equipment.

Under these conditions, therefore, the application of labour to capital may profitably proceed well beyond the point at which diminishing returns to labour set in. This may however often be inconsistent with the use of modern large scale methods of production where the ratio of capital equipment to labour is normally fixed within narrow limits by the nature of the productive process.

The superabundance of labour in Japan not only provides technical and economic reasons for the survival of labour-intensive methods of production, but also stimulates preference for labour-using methods from a social standpoint. The knowledge that the introduction of labour-saving methods of production is liable to increase unemployment may be expected to act as a deterrent to large-scale changes in this direction.

Not only the overall shortage of capital, but also the nature of capital supply tends to maintain small scale production. Although large accumulations of capital are limited to a very few financial groups, capital in small amounts is widespread. If the stock market were more highly developed and if the habit of investing were more widely diffused, these small accumulations of capital might find their way into large scale industrial investment. In Japan, however, if a man possessing a few hundred pounds were to invest it in industrial stocks, he would still be under the necessity of finding some secure employment for

himself. If, on the other hand, he invests his stock of capital in a small manufacturing plant, the investment itself provides employment directly for himself and possibly for other members of his family as well. In a country like Japan, where employment opportunities are limited in relation to the supply of labour, and where, in any case, employment tends to be insecure, the advantages of using one's capital for self-employment are very real.

The high elasticity of supply of small entrepreneurs is also important in maintaining the position of small business in the Japanese economy. Although profits are low and risks are high, there is always a supply of persons willing to accept the risks for the privilege of being in business on their own account and in return for the advantages mentioned in the preceding paragraph. Figures published by the Bureau of Medium and Small Business for 1951 (a good year for Japanese business) indicate that roughly 10,000 firms employing between 5 and 199 persons went out of business during the year. In spite of this, about 30,000 new firms were established in the same period. About 94% of each figure represents firms employing between 5 and 29 persons, so that the amount of turnover is very much higher amongst the smallest firms. The population of small enterprises is thus continually replenished by persons attracted by the real or imagined advantages of being in business on their own account and who are prepared to gamble on the actually very remote chances of success.

The markets for factors of production, then, are such as tend to promote the survival of small scale production. The nature of the markets for products and materials may also have a similar effect. Some features of product markets which make for small scale production (1) have already been mentioned. Variety and fluctuation of demand, and sometimes the local nature of demand, often make large scale production unprofitable. These are familiar phenomena in most countries, but are especially important in Japan, where this variety of demand goes further than regional and class differences in taste. To some extent this demand for variety is due to the basic simplicity of Japanese design and of the Japanese way of life, which permits, and seems to require, great variation of detail. The Japanese room is simple and uniform and it is in household utensils of all sorts that the Japanese express their individual taste. Again Japanese native dress gives practically no scope for variation in the cut of the garments themselves, and individuality is expressed in the texture and pattern of the materials used. Where demand is so varied, large scale production is hardly possible, and production of small orders in small units is the rule. It is noticeable that the Japanese do not demand as great variety in articles associated with western ways of life, and if the trend away

(1) See above, pp. 93-4.

from traditionally Japanese culture continues, this reason for the survival of small scale production may be considerably modified. Seasonal and cyclical variation in demand will, however, probably continue to limit the possibilities of large scale production.

Connected in some way with market conditions, but yet distinct from them, is the effect of conditions of production in the small plants themselves. In the short run, at least, it is the ability of small plants to produce cheaply and to adapt themselves to changes in demand which enables them to survive. Low cost and flexibility are not, however, the results of efficiency and intelligent planning, but are achieved at the expense of bad working conditions and very low returns. The availability of cheap labour and imperfections in the labour market enable small plants to make up for inefficiency by low wages, long hours and bad conditions. The use of poor quality labour - apprentices and old people - and part-time labour reduces costs still further. Often production is cheap because profits are either very small or actually negative. Indeed, if proper allowance is made for the wages of the small master and the labour of his family, profits in very small plants can hardly be said to exist at all. Outworkers and small subcontractors consider themselves lucky to scrape a livelihood, let alone to make anything in the nature of a profit. It is

no exaggeration to say that, in the aggregate, profits do not exist in Japanese medium and small scale industry. Flexibility and a low level of costs are thus achieved at the expense of a reduction in the standard of living of workers and masters alike.

Often cost, or at any rate imputed cost, is lowered as a result of something like joint production. The most obvious case is where a farming family engages also in simple household production (e.g., weaving). The work is performed in the intervals of agricultural work and the labour is thus practically free. Even where the work is not performed in the farm-house itself but in a nearby factory, the effect is basically the same. All cases where income derived from such work is regarded as a subsidiary or supplementary income fall into the same general category.

Cheapness and flexibility of cost structure are powerful factors in the survival of medium and small scale industry, but they are achieved as a result of over-population, shortage of industrial capital and undesirable conditions of production.

A third set of survival conditions may be found in the relationship between medium and small scale industry on the one hand, and large scale industry on the other. We have already seen that direct competition between smaller forms and larger is very rare. Although competition is a feature of small plants in Japan, this competition,

though fierce, is normally confined within a single stratum of firms. In general, the nearer to the base of the industrial pyramid, the more intense is this competition likely to be, but it almost always remains horizontal rather than vertical. This "stratified competition" as a feature of Japan's industrial structure may help to explain the position of medium and small scale industry. Its relationship to large scale industry is neither competitive, nor precisely complementary. In relation to large scale capital, small firms stand in something closely analogous to the position of employees.

This relationship appears in its most obvious form in sub-contracting. The stratified structure of the engineering industry, for example, has already been
 (2)
 described. The industry is composed of at least five or six layers, the top one consisting of a few large firms enjoying special privileges, and the lowest including a vast number of very small plants. Within each layer competition exists, but competition between one layer and another is most unusual. Moreover the intensity of horizontal competition falls as we go up the pyramid, and at the top co-operation and collusion are the rule. So long

(2) See above, pp. 149 foll.

as monopoly or oligopoly exists in the higher strata, and fierce competition prevails in the lower, each stratum occupies an advantageous position vis-a-vis the strata below it which is reflected in the higher profit rates of larger ⁽³⁾ firms. In practice a large proportion of the profits of large firms is derived from their ability to take advantage, through sub-contracting and in other ways, of fierce competition and poor conditions in small plants.

The availability of small plants for sub-contracting works to the advantage of large plants in another way. Fluctuations in demand can be covered by adjusting the amount of work put out to sub-contractors rather than by changing the degree of utilisation of the large plant. In other words, large plants shift the risks of changes in demand on to medium and small scale industry. The survival of medium and small scale industry is thus in the interests of the large firms themselves, and, so long as those conditions persist, the position of medium and small scale industry, although dependent, is relatively assured.

Medium and small scale industry survives, then, for a number of reasons, of which excess population, shortage of capital and market imperfections are among the

(3) See below, Tables 19 and 20.

more important. Most often, however, it survives only because it is tolerated by big firms which can exploit the disparity in the degree of monopoly. It has not, however, continued to exist unchanged. The path of its development from the cottage industry of Tokugawa times has been traced in Chapter II. Over the last hundred years Japan's native industry has succeeded in adapting its technique and organisation to altering circumstances, at least to the extent of retaining a large share of Japanese industrial production and employment. Whether or not it will continue to do so depends not only on the continuance of the conditions which have so far permitted its survival, but also on its ability to adjust itself to future changes in those conditions.

(ii) Why medium and small scale industry remains small

If expectations of the gradual disappearance of medium and small scale industry were not fulfilled, neither was the hope that it would grow into modern large scale industry. If economies of large scale exist, firms must be expected to grow to a size at which they can take advantage of them and failure to do so requires explanation. Marshall's concept of the representative firm is an early attempt at such an explanation in terms of the difficulties with which a firm meets as it reaches out after economies of scale. Marshall emphasised the decay of entrepreneurial

faculties and the increasing imperfection of markets which accompany an increase in scale. Others have stressed increasing difficulties of management, problems of increasing risk or difficulty in raising capital.

Any explanation of the failure of firms to take advantage of economies of scale must depend on the operation of some factor or factors which, as the firm grows, counter-⁽⁴⁾balance these economies. Steindl, in an interesting monograph, has introduced two new ones - "the proportionate increase in the ratio of capital to sales" which becomes necessary as the firm grows, and "the absolute profit margin (measured as a ratio of cost) obtaining with the smaller firm". Increased capital intensity will tend to lower the rate of profit on capital as the firm grows, while the smaller the original profit margin, the more likely is it that growth in scale will bring greater profit on capital.

Steindl derives these conditions mathematically in the following way. If π = total cost and s = annual sales, we assume that $\frac{\pi}{s}$ is a decreasing function Fz of size, z . We also assume that the ratio of capital employed, I , to sales is an increasing function of size, ϕz . If the rate of profit on capital is e , we can write

$$e = \frac{1 - Fz}{\phi z}$$

(4) Joseph Steindl, "Small and Big Business - Economic Problems of the Size of Firms". Institute of Statistics Monograph No. 1, Oxford, 1947.

If e is to increase with increasing size, the first derivative of the above function must be positive. At this point Steindl assumes $e > 0$ and $(1 - Fz) > 0$ to differentiate as follows :-

$$\log e = \log (1 - Fz) - \log \phi z$$

$$\frac{1}{e} \frac{de}{dz} = \frac{-Fz'}{1 - Fz} - \frac{\phi z'}{\phi z} > 0$$

$$\frac{\phi z'}{\phi z} < \frac{-Fz'}{Fz} \cdot \frac{1}{\frac{1}{Fz} - 1}$$

In fact if costs are properly imputed, the rate of profit on capital and even the profit margin may well be negative or zero, and for small firms is probably rarely > 0 . If the profit margin happens to be zero, Steindl's condition does not hold. If no such restrictions are put on the values of e and $1 - Fz$ the derivation is :

$$\frac{de}{dz} = \frac{\phi z \cdot -Fz' - (1 - Fz)\phi z'}{\phi z^2} > 0$$

or, since ϕz^2 must be positive,

$$- \phi z Fz' - (1 - Fz)\phi z' > 0$$

Since neither ϕz nor Fz can be zero we can divide to obtain

$$- \frac{Fz'}{Fz} > \frac{\phi z'}{\phi z} \cdot \left(\frac{1}{Fz} - 1 \right) \dots (1)$$

which holds for any profit rate or profit margin. If, however, the small firm has no profit margin, the condition about increased capital intensity no longer applies, as any reduction in cost as a proportion of sales will result in an

increased rate of profit on capital irrespective of the increase in capital intensity. Moreover, if the small firm were actually making a loss, the rate of loss expressed as a proportion of capital would be smaller, the greater the increase in capital intensity.

If, therefore, profit margins are very low or negative, as they are in Japanese small scale industry, larger firms will always earn higher profits on capital so long as economies of scale exist at all. Figures for profit margins and rates of profit in Japan indicate that this is, in general, the case.

(5)

Table 19 - Profit margin by size of firm and industry (1951)

Industry	Size of firm by capital employed (million yen)					
	Under 2	2-5	5-10	10-50	50-100	Over 100
Mining	4.3	4.9	23.6	11.0	8.5	13.9
Foodstuffs	4.3	6.6	2.2	7.4	6.7	6.4
Textiles	6.4	9.6	5.9	12.1	11.5	20.0
Paper, etc.	11.9	7.4	12.7	16.6	19.5	27.0
Chemicals	4.8	3.0	8.7	9.5	12.2	20.9
Glass and ceramics	4.4	6.2	0.7	11.8	16.2	14.7
Primary metal industry	5.6	3.7	8.0	10.7	13.7	13.0
Metal products	1.8	9.2	6.9	6.6	13.9	16.1
Machinery	5.5	4.2	5.3	6.9	7.3	8.4
Electrical equipment	4.4	8.2	6.2	8.8	11.4	11.9
Transport equipment	2.5	4.0	4.7	3.2	6.8	6.9
Other manufacturing	4.4	8.4	4.0	5.7	5.7	12.3
All manufacturing	4.9	7.4	5.4	8.9	9.9	16.2

(5) Taken from Chusho Kigyo Cho (Bureau of Medium and Small Business), "Chusho Kigyo Kankei Tokei Shiryo Shu" (Collected Statistical Material on Medium and Small Business), pp. 22-23. Profit margin is calculated as $\frac{\text{profit}}{\text{total receipts}} \times 100\%$.

There is hardly any doubt that the profit margins shown for firms in the smallest size range are higher than they would be if costs were accurately calculated. Costs of labour and management are almost certainly underestimated by not making proper allowance for the labour of the owner and his family. Much of the work of small firms consists of sub-contracting, which usually excludes the cost of materials from the calculation, making the profit margin higher than it would be if these costs were included. Moreover these figures, which are prepared by the Ministry of Finance, refer only to legal persons, and so exclude a large proportion of the smallest enterprises. Apart from a drop in the 5-10 million yen size range, profit margins rise fairly steadily with size, and are fairly high for the larger firms.

(6)

Table 20 - Profit rate by size of firm and industry

Industry	Size of firm by capital employed (million yen)					
	Under 2	2-5	5-10	10-50	50-100	Over 100
Mining	17.8	11.4	23.6	13.7	36.9	77.8
Foodstuffs	11.3	14.2	3.9	16.6	14.0	14.7
Textiles	13.1	19.8	9.1	19.3	16.9	25.8
Paper, etc.	14.1	16.5	17.3	29.7	22.6	30.3
Chemicals	1.2	3.8	15.8	16.5	17.2	25.6
Glass and ceramics	10.6	12.2	0.6	21.4	23.7	21.4
Primary metal industry	16.2	10.5	11.3	19.6	19.3	14.7
Metal products	5.9	15.3	12.1	12.3	13.5	20.1
Machinery	13.5	8.8	7.0	8.3	8.4	6.7
Electrical equipment	10.7	8.9	13.7	14.4	17.5	12.2
Transport equipment	7.6	6.7	11.7	3.9	10.0	6.1
Other manufacturing	11.7	17.1	7.9	12.7	10.6	15.2
All manufacturing	11.8	15.2	9.1	15.4	14.8	19.4

(6) Ibid. pp. 20-21. Profit rate = $\frac{\text{profit}}{\text{total capital}} \times 100\%$

The rate of profit on capital is again considerably overestimated for the smallest firms. It seems clear that the true profits of very small firms are very low indeed, and that there is a kind of hierarchy of profit rates, the rate becoming higher as the firm increases in size. The 5-10 million yen size group forms an exception to this steady rise of profit rates, which seems to indicate that there is some difference in kind between firms above this size and those below it. It seems likely that at this size the advantages of cheap family labour and bad working conditions cease to be available.

In Japan, then, at any rate, low profit margins among small enterprises and the existence of considerable economies of scale far outweigh the effect of increasing capital intensity, so that the larger firm almost always has an advantage in terms of profit rate.

The disadvantages under which small firms operate show themselves in technical backwardness and difficulties of financing. The technical equipment of many small workshops is sufficient only for simple processing or the making of parts, and is incapable of producing a complete product saleable in an open market. This technical inferiority is a major reason for the failure of small plants to grow and to escape from their dependent position. With the development of new techniques using precision equipment, this limitation on the growth of small plants is likely to become more important.

Financial weakness also acts as a brake on the growth of small firms. Most of them live from hand to mouth as regards finance and very seldom accumulate sufficient funds to expand their operations to any extent. We have already suggested that true profits scarcely exist among small plants, and accumulated profits are therefore not available for investment in plant. If profits are made in a period of prosperity they are likely to be absorbed by a higher level of consumption, or dissipated in maintaining the small factory owner and his dependants over a period during which orders are scarce. In spite of various official schemes for the finance of medium and small scale industry, the small entrepreneur finds great difficulty in obtaining sufficient even for day to day needs, let alone for expansion.

In addition to actual hindrances to growth, the existence of what may be called economies of small scale should be recognised. Certain economies are available to the small firm while it remains small but diminish with growth over a certain range. Among these economies of small scale should be reckoned such things as the availability of cheap labour, ability to vary working hours, and, for the smallest workshops, exemption from the operation of certain factory and labour legislation. Flexibility of operation of small enterprises also, insofar as it is a result of smallness, may be considered as an economy of small scale.

In industries in which these economies of small scale are important, they provide an inducement to remain small. If there is any considerable intermediate size range over which neither economies of small nor of large scale operate it may well be impossible for a firm to grow, whatever the theoretical advantages of bigness. There may be more than one optimum scale of operations, but the gaps between the optima may be too great to be bridged by a growing firm. This seems to be the case in a number of Japanese industries, and provides a reason for the lack of mobility of firms from one stratum of the industrial pyramid to another.

Thus although, as Steindl's analysis shows, small firms occupy an inferior position in Japan, they are unable to escape from the disabilities of smallness, partly because of technical, financial and managerial weakness, and partly because of positive advantages of small scale.

(iii) Effects on the Japanese economy

The fact that a large part of Japanese production is carried on in small units of the types described in this study has imposed and, we may presume, will continue to impose certain restrictions on Japan's industrial development. It has already been observed that productivity, in terms of productivity per head, is low in

(7)
 small plants. Since technique is, in present circumstances, unlikely to improve, no significant rise in productivity can be expected. Not only is this so in the small plants themselves, but the existence of a large number of relatively inefficient small plants able to produce cheaply only on the basis of bad conditions and low standards of living holds back technical progress in the larger plants also. So long as these sources of cheap production are available, large firms may be expected to continue to take advantage of them rather than to undertake large internal investment in improved plant. In this way the large firm not only sheds the risks of investment in fixed plant, but often gets work done cheaper than it could do it itself. Under these conditions investment in new plant by large firms has undoubtedly been lower than it would have been if small scale industry had not been available. One factor may be expected to reduce this traditional reliance on small plants. New machinery is being developed which performs processes which it is physically impossible to perform at all without expensive equipment beyond the reach of small plants. If Japanese industry is to take advantage of these developments, the investment will have to be made by large

(7) See above, p. 126. This does not deny that some economies are almost equally available to large and small plants.



plants. Unwilling as large plants are to undertake such investment, the disadvantages of not doing so are increasing as time goes on, and may eventually become so great as to overcome this reluctance.

From the point of view of labour, there is no doubt that conditions and particularly wage rates in medium and small scale industry are unsatisfactory. This, however, must be attributed not so much to the existence of small scale production, as to more deeply underlying conditions of labour and capital supply which are in large measure responsible both for low returns to labour and for the survival of small scale production itself.

The continued existence of medium and small scale production thus restricts investment, hinders technical progress and perpetuates low standards of living. On the other hand, in an economy such as Japan's, where capital is scarce and labour abundant, there is no particular gain in maximising output per head of the employed population. The application of labour to capital may proceed far beyond this point before maximum total output is attained. Labour using methods are thus likely to produce a higher total output than could be achieved by the concentration of capital in highly mechanised industry leaving a large section of the potential working population entirely without access to means of production.

On social grounds also, the thinly spread use of capital provides wider employment and somewhat greater equality of incomes than the use of capital intensive methods of production. Concentration on such methods would involve embarrassingly large transfers of income for the maintenance of redundant population placing an almost intolerable burden of taxation on the productive sector of the economy. To look at the matter from another angle, any reduction in private cost achieved by labour saving methods must have set off against it the social overhead cost of maintaining redundant population, which, from the point of view of the Japanese economy as a whole, is escapable only in the very long run. Against the disadvantages of small scale production, then, we may set higher and more widely distributed income.

In any case, the course of Japan's industrial development has been such that she has been committed to widespread use of small scale production. This has entailed disadvantages and created some serious problems, but it is not easy to see how these could have been avoided. Shortage of industrial capital, or rather failure of industrial capital formation to keep pace with the needs of the economy, has been the basic problem of Japanese industry. The moral of Japan's experience seems to be that shortage of industrial capital leads to inefficient methods of industrial organisation. Japan's experience also seems to indicate that the amount of industrial capital necessary to start the process of

industrialisation and (even more important) the rate of industrial capital formation necessary to sustain a programme of rapid industrialisation must be very great indeed : far greater, perhaps, than has generally been supposed. In Japan's case, capital requirements could have been met only by a very large scale importation of foreign capital. The Japanese were unwilling to adopt this alternative since they considered that it would have threatened their economic and political independence.

Modern Japanese industrial development has been, to a great extent, a product of the political and military necessities of the time rather than a long range plan for economic development. If the persistence of a large body of medium and small scale industry now proves an embarrassment or a handicap to the economy as a whole, this is, to some extent, a result of the inevitable speed with which the early stages of industrialisation were carried through.

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