

Title	Metamorphosis of japanese small business in history : a retrospective of "problems and studies" of small business in Japan
Sub Title	
Author	Sato, Yoshio
Publisher	
Publication year	1988
Jtitle	Keio business review Vol.25, (1988. ) ,p.19- 51
JaLC DOI	
Abstract	In Japan, small industries have been taken up as an important element of the economic/industrial structure from the turn of this century. We traced the legacy of small business studies and problems in Japan. The focal point is the dramatic development and metamorphosis of Japanese small business in its technological and managerial ability especially in the last two decades. Under the rapid industrial restructuring; small business in Japan is struggling for establishing management strategies of its own in diverse directions, especially of internationalization and informatization.
Notes	
Genre	Journal Article
URL	<a href="https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AA00260481-19880000-03920117">https://koara.lib.keio.ac.jp/xoonips/modules/xoonips/detail.php?koara_id=AA00260481-19880000-03920117</a>

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## METAMORPHOSIS OF JAPANESE SMALL BUSINESS IN HISTORY

— A Retrospective of “Problems and  
Studies” of small business in Japan —

by

*Yoshio Sato*

### **ABSTRACT**

In Japan, small industries have been taken up as an important element of the economic/industrial structure from the turn of this century. We traced the legacy of small business studies and problems in Japan.

The focal point is the dramatic development and metamorphosis of Japanese small business in its technological and managerial ability especially in the last two decades. Under the rapid industrial restructuring, small business in Japan is struggling for establishing management strategies of its own in diverse directions, especially of internationalization and informatization.

### ***I. Introduction:—Frame of Reference—***

#### **(1) Japanese small business has been attracting the world-wide attention.**

Today we are in an era of “Enthusiasm for Small Business” throughout the world. Every country, not only in the free world, but also in the socialist bloc, and in the developed countries and developing countries, has been expecting very much from its small business sector and thus endeavouring to promote development of that sector for diverse reasons.

In the industrialized nations, the newly created business usually equated with small business has been expected to become a key to revitalizing of the economy as a whole; in the midst of transformation of the industrial structure, which has been called “the third industrial revolution”, the conditions under which small business could take active roles have emerged multitudinously.

The developing world has recognized that in order to accelerate industrialization an urgent priority should be placed on fostering small business more actively than large business, and that the transfer of technologies to small business is basic to raising its technological level.

Not only the developed countries but also the developing countries have expected small business to become an important source of job creation and have re-appreciated small business as a work-place with human faces for people.

In the midst of the rising enthusiasm for small business, Japanese small business has been drawing a world-wide attention. Japan has achieved a remarkable industrial development and could have acquired an extraordinarily strong international competitiveness. The basic factors which have made such a remarkable achievement possible are "Japanese-style management" and a huge and robust group of small business. The subcontracting production system in Japan has been contributing greatly to the wonderful performance of Japanese industry. "We want to learn from Japan's small business which has been showing such a vitality", are the words which we hear from all over the world.

Hereafter, we may focus on small manufacturing industries.

## (2) The necessary frame of reference

Intrinsically, small business has various aspects and multitudinous elements. **SMALL BUSINESS** is a generic term discribing "a group of those firms which are not large". It designates "a group of heterogeneous and pluralistic firms." (YAMANAKA Tokutaro, 1948. p. 30) And those phenomena which generate problems change in nature over years.

Recently, especially in the latter half of the 1970's and 80's, as the industrial structure has gone through its reorganization, it is quite natural that Japanese small business has shown such a radical transformation that we have never witnessed before. Yet the level of technological and managerial strength has been raised so high that small business could successfully cope with any change in the industrial structure. Now we can entertain a new image of small business in Japan facing the technological and managerial innovations and endeavouring to undertake its own managerial innovation and restructuring of its own; thus we can visualize the new potent small business of Japan in the world, riding through the waves of internationalization and informatization.

Accordingly, when we venture to retrospect the historical development of the problems and the studies on small business at the current apex to which Japanese small business has climbed up so far, two frames of reference are required.

The first is "historical dialectic." It can be said that Japanese small business has achieved a typical "DIALECTIC" development in the capitalist structure, which has witnessed dynamic growth in the past.

The second is the global frame of reference in terms of the international comparative studies. In order to make a correct assessment of the "achievement" of Japanese small business, only through the comparative studies on problems of small business for each country we can define the historical position of Japanese small business.

## *II. Japanese Small Business in the World*

### (1) Categorization of problems of small business

Depending upon how each country has been industrialized or how each capitalist economy has been developed, we can classify the problems and characteristics of each country's small business into several distinct patterns. As a result of his many years of research on small business in international perspective, YAMANAKA Tokutaro presented six distinct patterns (KEIZAINO KOKUSAIKA TO SEKAINO CHUSHOKIGYO—

*Internationalization of economies and small business in the world*, in FUJITA and FUJII, 1976, pp. 19–31).

1) *The industrialized nation pattern A*—The United Kingdom. Elimination of small factories by larger factories. “The U.K. was the first society which made problems of small industry as a recognized fact, but it did not let small industry survive even after it became aware of problems of small industry.”

2) *The industrialized nation pattern B*.—The European Continent countries. The continued existence of small business, GEWERBE, HANDWERK, Guilds and so on in order to maintain the social order intact, in which small business people would compose the middle class. Recently, the European Community came to recognize the problem of small and medium business as an issue.

3) *The industrialized nation pattern C*.—The United States of America. It is a newly opened country without any traditional industry and a country of Jeffersonian democracy where ideals of free competition and equal opportunities are maintained, beset minority problem. Australia and Canada have the similar characteristics with the U.S.A..

4) *The industrialized nation pattern D*.—Japan. (1) A Japanese style industrial revolution was taken place on a two-wheel structure of “traditional industry” and “western-style industry”, and later passed through a slow transition from traditional industry to western-style industry. (2) A big gap between the strength of larger firms and small firms to cope with the 1927 depression lead to recognition of the problems of small business. (3) Whenever Japan had to face a turning point in its economic development, larger business and small business continued their own development, both restraining and competing each other. It has been characteristics of small business in Japan to have a big gap with large business, to be dominated by large firms in a form of subcontracting and to have existed in too many. “Since the Meiji Era (1868-1911), large firms have been at the very front line of Japan’s economic development and they have removed small business from the main stream of economy and in this forced isolation small business and hence its problems came to emerge.”

5) *The developing world pattern*. (1) The developing world has “imported” an idea of small business from the industrialized world. (2) Under the strong pressure of overpopulation, the countries in the developing world had to adopt an industrial policy to alleviate the poverty, and thus they expect very much from small business which could usually creat many jobs.

6) *The socialist country pattern*. In those Eastern Europe countries where the old handicraft industry still exists though under the state-owned enterprise system, “some legacy of capitalism” is still found in the service industry and repair works. Also even in part of production sector it is being re-examined.

“Small business existing in each country and the comprehension thereof are very diversified. However, though there are so much diversified understanding and recognitions, each country has come to recognize its small business sector as a vital part of economy distinct from larger business. This recognition has been taken up all over the world.”

The world as a whole has become aware of the three aspects of small business prob-

lems. (1) Importance of small business. (2) Small business in contrast with large business. (3) Changing from the domestic frame of reference to the international frame of reference to look into the relationship between large and small business. "Under different circumstances, each country has come to appreciate the importance of small business for different reasons. The world's recognition of the importance and problems of small business, as mentioned above, calls for grasping the scientific method or law by means of which the international recognition of small business running through various countries' local recognition can be identified, while assuming that each country has its own different problems of small business." (YAMANAKA, same pp. 30-31.)

## (2) "Small business" vs. "medium- and small-sized firms"

In Japan, the term "medium and small business" is used. It was in 1911 that the Ministry of Agriculture and Commerce came to make a distinction between SMALL-scale and MEDIUM-scale industry. The Ministry used a concept of "medium-scale industry" to categorize weaving mills using power looms and a concept of "small scale industry" for domestic traditional weaving industry; then the Ministry created a new classification, merely combining the two concepts into one, that is, "medium and small" (YUI, 1964, pp. 55-56.).

After the economic boom of 1910's came the financial panic in 1927. Then, in order to assist "commerce," the term of "medium and small commerce and industry" appeared.

In 1948 when the SMALL and MEDIUM ENTERPRISE AGENCY in the Ministry of International Trade and Industry (MITI) was set up, the term "medium and small" came to be established.

## (3) Status of the studies on medium and small business in Japan

"There is a specific group of Japanese economists devoting themselves almost exclusively to the study of small-medium enterprises, thereby reflecting the abundance of these enterprises in Japan and the importance of their problems. In addition, each year a tremendous quantity of new articles and books is published so that even the economists devoted to this special field cannot find time to cover all the material. In such a situation, there is an urgent need either to compile a bibliography of the most important works in book form, or to produce new books which will summarize the major results achieved to the present." SHINOHARA Miyohei began his review on the study of medium-small business in Japan with the statement above. (A Survey of the Japanese Literature on Small Industry in *The Role of Small Industry in the Process of Economic Growth*, ed. by Bert F. Hoselitz, Houton, 1968, p. 3)

This statement did not mean to be cynical, but tried to stress the tradition and great achievements in the study of medium and small business in Japan. Still further SHINOHARA said, "Generally, Japanese scholars of industrial organization has been inclined to imitate the American frame of reference which emphasizes the analysis of the situation of 'sellers' monopoly". Japanese industrial organization has been much crowded with small subcontractors and affiliates of larger parent companies. Why have not those scholars of industrial organization become conscious of importance of 'buyer' monopoly

or monopsony". (SHINOHARA 1976, pp. ii—iii)

As I pointed out at the beginning of this article, we can say that the current world-wide enthusiasm for small business presents an important challenge and a new problem to the established "ECONOMICS".

How has the economics treated the problem of small business? Throughout the latter half of the 19th century, the argument for "the final demise of small industry" was predominant and the Marxian economists predicted "the downfall of small industry under big or monopoly capital." Beginning with A. Marshall, "the theory of biological growth of firms", "the theory of optimum scale", "the theory of monopolistic competition and imperfect competition", and "the theory of industrial organization" have taken up "small business" in the development of each theory.

"Though small business may be defined by changes in market and technology, there is a certain set of valid conditions and reasons for small business to continue to exist."

Today the synergistic effects of actual transformation of the industrial structure and the changes in the sense of the social value calls for an active evaluation of small business to survive, which the established ECONOMICS could not satisfactorily explain. All this may lead to the basic re-examination of "economies of scale", or a theorization of "dis-economies of large scale in management", or "a new theory of a social stratification." At any rate, small business studies has now secured a new status and is facing a new turn.

### ***III. The Development of Problems and Studies of Small Business***

#### ***—Before the World War II—***

#### **(1) Development of "the study" before the WW II**

In the process of industrialization in Japan since Meiji Era (1868–1911), there were two directions in which the scholars became conscious of small business problems as the relevant tasks for their study. (1) The imported economics, especially the German Historical School and Social Policy School, had developed their own view on the problems of small industry. This was the main stream of the study. (2) There were other scholars who pointed to solving the serious problems of small business by means of government policy during the actual process of the new Japanese capitalism. These two different directions came to be intertwined in the history of the study. Telling so, OJIRO Taromaru (1970, pp. 188–9) divided the whole history of the studies in Japan into the following periods:

#### **< The pre-history of the study >**

##### ***PERIOD I.*** (From the beginning of Meiji Era—1868 to about 1900)

Scholars came to be conscious of the problems of small business as the problems of the government's policy.

##### ***PERIOD II.*** (From about 1900 to the year 1915)

The new recognition of the problems by the imported economics for its own study objective together with still existing awareness of the problems for government's policy.

##### ***PERIOD III.*** (From after the World War I to the period during which Japan was pre-

paring for the WW II.)

The two different trends emerged during the second period came to be related with each other and the critical (Marxist) economics posed another consciousness.

- A. The first half of the period—The consciousness of small business was established (up to 1930).
- B. The second half of the period—The scholars began to be conscious of the problems as part of the economic structure and the frame of reference which would help studying the essence of “small business” was formulated (up to 1936).

< The main part of the history of the study >

*PERIOD I.* (From 1937 to 1945)

The development of consciousness of the problems of small business from the view of looking into the true nature and the establishment of the foundation for study.

*PERIOD II.* (From 1945 to the present)

The substantive development of the structural analysis of the post war capitalism in Japan and of the theory of small industry or business (the analysis of real situation and the new theoretical development).

It is quite difficult to trace each period in detail. All I can say here is that there were a great deal of studies on small business; the effect of the German social policy school, the controversy on the Japanese capitalism between the sedate academic group and the labour and agriculture activists, an impact of Showa Panic (1927), the study on the actual situation of the changes of small business immediately before and during the War. The bibliography given for reference shows only a small part appeared before the WW II.

(2) The legacy of the “study” undertaken before the War.

History does not make a quantum leap. It would be impossible truly to understand how the Japanese style system of the division of labour has developed to the present level, unless we trace the historical development of industrial organization—a transformation from the traditional putting-out system to the subcontracting system, or to the affiliate system. We ought to have grasped as completely as possible the transplanting of the modern industry and the transfer of the Western civilization and technologies into Japan since Meiji Era, and the historical development of the industrial organization after all that. Especially, we know that many other subjects yet to be studied are still confined within a blackbox, such as the dramatic changes in the subcontracting system following the military mobilization of small industry during the WW II, the factors which could have created a huge number of small and medium enterprises even during the decade beginning in 1945 despite the serious turmoil and etc.

At any rate, we must succeed the legacy of small business studies which was initiated and developed before the War. The legacy we must succeed is as follows:

- (1) In Japan, the industrial revolution took place on a two-wheel structure consisted of the traditional and Westernized industry under “the national policy to promote industry” (YAMANAKA, op. cit.). In the interest of the national policy and from the

standpoint of the imported economics, Japan had a great interest in the problems of small industry and in promoting it from the early time.

And originally, in the study of Japanese capitalism before the War, the agricultural problems and problems of small business which emerged as a characteristic and structural contradiction of Japanese economy were taken up for study with much interests. Accordingly, after this, the predominant theme for the study of small business was "monopoly capitalism and small business." Thus the problem of small business was taken as a typical aspect of the structural contradiction of Japanese monopoly capitalism.

(2) Next, much attention was drawn to the forms by means of which small business could survive. In 1917, UEDA Teijiro reported at the annual meeting of the Society for the Study of Social Policy (Shakaiseisaku-gakkai), "Recently, in Japan, there appeared some enterprises which started in a small scale, in various types of industries." And the questions posed here were as follows: (a) Is all small business destined to die and to be replaced by large business? (b) Is the demise of small business disadvantageous to the society? (3) What kind of policy should the Government take toward small business? (The Society for the Study of Social Policy, 1918, pp. 10, 30-31.)

(3) The controversy between FUJITA and KOMIYAMA was on "domination of small industry by commercial/merchant capital" or "possibility of development of subcontracting industry as one category." However, it was basically on the forms of small industry, which are essential for existence (KOMIYAMA, 1941, FUJITA, 1943). The study contributed by KOMIYAMA was of great value in emphasizing on the ways how the development of small industry could be initiated.

(4) Before the War, as we could have expected, the problem of small business tended strongly to be treated as a problem of overpopulation, the self-employed, and the under-employed people (See ARISAWA, 1940). On the other hand, TASUGI Kisou (1941) raised a question of "subcontracting system as social division of labour" and OHTSUKA Ichiro (1943), YAMADA Fumio (1941), KAWABATA Iwao (1941), SUEMATSU Genroku (1943) and others raised arguments on the basis of non-Marxist economics.

### **(3) The development of the Japanese capitalism and the problems of small business before the War; A Summary.**

1) In Japan, capitalistic industrialization was initiated later than other advanced nations. Soon after Japan started industrialization, a huge influx of people who were driven out of farm area into cities. "The semi-feudalistic landownership" made many farmers surplus labour or reserved army. Under such labour market conditions, the low-wage worker became a rule.

2) Therefore, a huge number of the unemployed people became what was called "compelled independence", and set up their own tiny shops, which are exactly the disguised unemployment. A class of the long-term unemployed became self-employed, and some of the employees of small shops also started small business. Because of his/her low wage or low income, many small business were born to die; this process continued to form a vicious circle. This showed a highly conspicuous characteristic of the Japanese capitalistic society all through the chaotic period before, during and after the War.



This very "re-production structure" is "the dual structure" as one category.

3) However, under the domination by the commercial capital and later by larger industrial capital, small-medium enterprises were directly and indirectly mobilized and utilized for the purpose of carrying out the War production and even under these unfavorable conditions they grew on their own way despite the exploitation, receiving some transferred technologies; industry dominated by wholesalers and subcontracting industry have grown. The mobilization of small enterprises as subcontractors during the War bequeathed the Japanese-style relationship between parent companies and subcontractors as a legacy of the past to the post-War period.

4) Japanese industry then had two things behind other more advanced nations; one is that even larger plants were behind those of other more advanced nations and the other is that small-medium enterprises were still behind larger enterprises, in terms of modern technologies. Moreover, the rapid industrialization created a relative redundancy of population, thus causing acute and severe population problems and labour/under-employment problem. In this way, the problem of small business became basically the problem of "how to save the destitutes".

#### SUPPLEMENT to Chapter III

As for the importance of small industries in Japan, KOMIYAMA Takuji (1941) made an elaborate estimation of the weight of industry units and work forces by number of workers scale as of 1930. (p. 4)

Table A.

		Numbers		Composition (%)	
Persons		Business Units	Work Forces	Business Units	Work Forces
A	1	665,437	665,437	53.9	16.5
B	2-4	505,839	1,346,328	41.0	33.4
C	5-9	35,876	234,875	2.9	5.8
	10-14	8,049	105,386	0.7	2.6
	15-29	9,118	202,654	0.7	5.1
	30-49	3,761	157,576	0.3	3.9
	50-99	2,839	217,675	0.2	5.4
	100-199	1,376	213,752	0.1	5.3
	200-499	802	274,643	0.1	6.8
	500-999	270	209,506	0.0	5.2
	1,000-	143	269,451	0.0	6.7
	Subtotal	62,234	1,885,518	5.1	46.8
D	Governmental Factories	400	130,787	0.0	3.3
E	All Total	1,233,910	4,028,070	100.0	100.0

KOMIYAMA made use of both the Population Census and the Census of factories

(kojo-tokei), and explained as follows. "Very small business with four or less workers accounts for 95% of all business units and 50% of all the workers. As for the work forces, small business with 30 workers or less accounts for 63%, business with 100 workers or less accounts for 73% of all work forces. It can surely be said a little more than 70% of all Japanese workers are working in small industries.

ARISAWA Hiromi (1939) emphasized the importance of small industry as the pool of surplus labour or reserved army (pp. 6-12) and showed the following table.

Table B. (parenthesis composition %)

Factory	Small/Medium Factory			Big Factory		Numbers Total
	5-29 workers	30-99	100-199	200-		
Factory	1931	(85.9)	(10.1)	(2.1)	(1.9)	64,436 (100%)
	1934	(85.6)	(10.7)	(2.0)	(1.7)	80,311 (100%)
Workers Employed	1931	(29.2)	(19.6)	(11.0)	(40.2)	1,660,332 (100%)
	1934	(29.1)	(19.6)	(10.1)	(41.2)	2,163,453 (100%)
Production-Value	1931	(24.3)	(20.3)	(12.4)	(43.4)	5,175 (100%)
	1934	(19.3)	(17.4)	(10.3)	(53.0)	9,390 (100%)
Percentage of production-value increase in case of increase of workers by 100%, 1931 v.s. 1934.						
	( 60)	( 117)	( 181)	( 270)		

ARISAWA concluded that productivity in big factories is much higher than the smaller ones, and very small industries are absorbing labour forces at a higher ratio compared with their productivity. So that these very small industries are very important from the standpoint of pooling surplus labour, or the industrial reserved army.

#### IV. *Development of the Problems and Studies of Small Business* —1945-1970's—

##### (1) Establishment of SMALL AND MEDIUM ENTERPRISE AGENCY, (MITI) and the period swarms of small enterprises were born

On August 1, 1948, the Small and Medium Enterprise Agency was established in the Ministry of International Trade and Industry. In effect, it was a result of a directive issued by the GHQ (General Headquarters of Occupying Army), and its idea came from the policy of the New Deal in the U.S.A.. This Agency's purpose is "in the light of the fact that sound and healthy independent small-business concerns will make the national economy sound and healthy, and to help the national economy to grow, to prevent the concentration of economic power and to secure the fair opportunities for carrying out economic activities to those who wish to operate business, the objectives of the Agency is to nurture and promote small business and establish the conditions sufficient to improve the management of small business (The Law to Establish the Small and Medium Business

Agency, Article 1, "Objectives").

Accordingly, a policy for small business in the post-war era began in a form of dissolution of the ZAIBATSU (old family monopoly or financial clique) and large companies together with a policy for economic democratization. All this helped lay the foundation for conception to have the distinct small business policy and the set view on small business which lasted years to come.

In reality, those owners of small enterprises and their employees who released from the war plants where they had been mobilized for war production, and the demobilized soldiers soon started business activities and consequently small enterprises sprang up in a great number. And during the Korean War, part of small business reaped a huge profit which in turn made the small business quite strong. Mr. Dodge, American Minister, had already put a strong pressure on the Japanese government to stabilize the economy, which soon resulted in a recession. Together with the recession caused by what was called "Dodge Line", the termination of the Korean War led to the bankruptcy of numerous small firms. Consequently, the small business policy was obliged to be "the policy to save small business." During this period, there was some diagnosis of management of small enterprises and there was also some cooperative organization among small enterprises. Thus, the key-note of the small business policy became a policy "to protect and nurture small business and to save it".

## (2) A policy on the economic growth and the theory of dual structure

The Government White Paper on Economy for 1957, for the first time in its history, took up the subject of small business and developed "the theory of dual structure". (pp. 33-43) While the White Paper published in the previous year mentioned "we are no longer in the post-war period", the 1957 White Paper pointed out that "the dual structure, namely the modern sector and the pre-modern sector exist side by side within one country", and there is no other way but to "reduce the dual structure" by a bold policy for economic growth, to eliminate the seemingly permanent unemployment in Japanese economy. The lively discussion took place on various subjects related to small business. It was quite characteristic of this period, from this time on, the non-Marxist economists and the government economists began to pay more positive attention to the problems of small business. About this time, for the first time, the fact that some of small-business firms even earned a higher rate of profit than larger firms came to be taken up for discussion. KOMIYA Ryutaro ("Monopoly Capital and a Policy for Redistribution of Income", SEKAI, March 1962) was a trailblazer, and there were other publications on the similar theme, such as one edited by KAWAGUCHI (1962), TAMANOI & UCHIDA (1964), and so on. And then "the dual structure" came to be discussed mainly as a problem of differentials between large and small business.

The process in which "the theory of dual structure" was being developed may be cynically said to have been the process in which "the dual structure" was being disintegrated. However, the awareness of "the dual structure" was strengthened in the process of the gradual disappearance of it.

During the first half of the 1950s, the rationalization of large enterprises and sudden

boom spurred by the volume brought the brisk activities of enterprises. No one could have made prediction that the period of the growth at high pace, with the annual growth rate of more than 10% of GNP, which lasted for more than one decade, would come. In reality, changes were occurring one after another. The overall achievement of various studies undertaken up to this time on the basis of appreciation of the problems of small business were published in four volume of "The Lectures on Small Business" (1962).

One big social change which took place in the years after 1955 was a mass migration of people from rural areas to cities and especially there was a large increase in the work force in the manufacturing industry (from 6,900,000 workers in 1955 to 13,550,000 in 1970, almost doubling in 15 years).

The demand in industry for junior high school graduates exceeded the job seekers among them in 1953 and similarly the demand for senior high school graduates came to exceed the job seekers among them in 1955. In 1970, the Employment Offices registered the more demand for workers than the job seekers. In 1965, in effect, Japanese economy, for the first time in its history, had to face a shortage of labour force (See NAKAMURA Takahide, 1978, pp. 287-325. And ODAKA, 1984).

In 1955, the Government actively proceeded on with the policy for rationalization of small business and then in 1958, the Basic Small and Medium Business Act, and a series of acts related to the promotion of modernization of small business were enacted. Many scholars on small business, facing the radical changes in the economic and industrial structure which they had never experienced before, continued to view the serious and difficult situation of small business which the rapid and radical changes had created, with the same frame of reference, that is, from the point of view "monopoly capital vs. small business", as before.

They still continued to discuss among themselves the contradictions of the policy to promote the modernization of small business and the risk of small business to become bankrupt because of modernization. "The modernization policy is making the existence of small business quite risky."

In retrospect, the problems of small business presented as a sort of distortion in the process of modernization (the disintegration of the traditional industry, the shortage of young labour force, bankruptcy forced by higher labour cost and etc.) might be said to be "national sacrifices" which Japan had to experience in the process of catch up with those more advanced nations. The sacrifices seemed to be shifted unilaterally to the shoulders of socially weaker small business.

### (3) Emergence of "Med-Business" and "Venture Business" Theory

The scholars on small business became aware of the actual changes and recognized their research posture against their idea of "monopoly capital vs. small business" in defining the problems of small business, out of which a new concept of "Med-business" (CHUKEN-KIGYO-RON) came. NAKAMURA Hideichiro (1964) coined a new term, CHUKEN-KIGYO or Med-business for a group of firms which have grown beyond the upper limit of small business. While NAKAMURA was examining the actual situation of "non-monopolistic large firms," he came up with this concept of firms as his case studies

were performed.

In the latter part of the 1960's, there was a noticeable increase of extremely small business or little business. Based on a survey of the actual situation of newly established petty firms, the scholars noticed a new type of small-scale enterprises, and thus came a study on "venture business" (seems a kind of Japanese-English). (KIYONARI, 1970; KIYONARI, NAKAMURA, and HIRAO, 1972, and KIYONARI, 1972)

The positive contribution made by the above discussion to the study on small business were; (1) these scholars introduced to the public preemptively those small firms some of which appeared quite novel and exceptional on their own right, (2) the factors which helped growth of these firms were highly praised, (3) the scholars claimed that the growth of these novel new small enterprises was rightful in the light of development and sophistication in the industrial structure in Japan. However, their argument was too remote from the old line of general discussion on small business then, and rejected without any hesitation and even criticized the argument on small business problems which was based on the concept of "contradiction of social structure." Consequently, a counter-attack on the new concepts was very severe. To those prevalent common small firms which had been struggling to adapt to the new changed situation, the seemingly new novel type of small forms looked like "some extraterrestrial aliens."

#### (4) Further development of subcontracting and affiliate system and control of them by larger business

In order to adjust and adapt to the rapidly expanding production in the period of high-rate economic growth, large firms tried to place under their control as their affiliates those able and strong small and medium factories. Consequently they helped those smaller factories to improve machines, equipment, technologies and management and at the same time required them to rationalize their production facilities; and in this way the relationship between large parent companies and smaller affiliates was transformed from that linked by quantity to that tied by quality ability. Small factories were operated with lower wages as supplementary suppliers in quantity and at the same time as a buffer to adapt to a fluctuation of business.

At this point, we should indicate how much the production of Japanese machinery

year	TV sets	4 wheel auto	No. of establishment	No. of employment
			in manufacturing	in manufacturing
1955	137	69	432,694	5,511,025
1960	3,578	482	487,050	8,169,484
1965	4,190	1,876	558,106	9,921,002
1973	14,414	7,083	708,447	11,961,133
1975	12,455	6,942	735,970	11,296,209
1981	15,964	11,180	(1980) 734,623	(1980) 10,932,041
1987	*****	12,240	(1983) 776,721	(1983) 8,389,763
	(thousand)	(thousand)		

industries grew during the rapid economic growth period, taking the example of TV sets and four-wheel automobiles total (production within Japan) and others.

Parent companies changed the control of their subcontractors from the status as supplementary suppliers and buffer to more rationalization and modernization of "subcontracting system management." Thus, in retrospect, small factories were developing in accordance with the dialectical rule. (See SATO Yoshio, 1980, and also summary of his article on Japan's subcontracting production system in the appendix.)

During the period of the economic growth from 1955 to 1973 and later in the period of the low-rate growth, there was a noticeable development of subcontracting small factories in terms of management quality and also significant strengthening of their potential for technological development. Consequently, their efforts were directed toward acquiring more advanced technologies. A certain survey indicated that 51.1% of the subcontracting firms claimed that their technological level is on a par with or above their parent companies (The Central Bank for Commerce and Industry Cooperatives<SHOKO-CHUKIN>, 1983).

In the 1980's, there were more discussions on subcontracting system or relationship from the point of view of quasi-vertical integration, intermediate organization, transaction cost, and networking organization.

#### **(5) Regionalism and the concept of "SMALL IS BEAUTIFUL!"**

In the 1970's, various new problems, such as numerous pollution problems, "the dollar shock" (changed into floating yen), many small manufacturers building factories in South-east Asia to utilize cheaper labour and etc., surfaced out. During this period, a self-reflection on "the way to seek only the economies of scale" was made by the scholars, which became a key note among them. This indicate a sort of modification of the policy toward the policy to promote "knowledge-intensive industries."

Then the regional and traditional and local industries were re-appraised; "regionalism" became very popular among the scholars. Just about this time, "Small is Beautiful" by E.F. Schumacher became quite popular throughout the world (original book appeared in 1973; Japanese edition in 1977). And this initiated the new discussion on small business which had not be seen before. Influenced by Schumacher's book, maybe, ITAKURA and others (1970, 1973), SUGIOKA (1973), YAMAZAKI (1977) and etc. participated in the disputes. And then, MORI (1979, 1982) and OHTA (1981) emphasized the importance of the small business' human aspect. Looking back at the Government policy to promote "the degree of knowledge intensiveness" in small industry, the policy was nothing but to encourage differentiation of products by means of "new product and new technology development". Then the first oil crisis gave this thinking a temporary setback.

#### **(6) Diversification of the small business problems.**

After the War, especially during the period of 25 years from 1955, Japan experienced the high-rate growth, two oil crises; during this process, though many small business firms disappeared, they were as a whole had grown and also been diversified. And appeared many interesting small firms, interesting in the sense that they developed their own

superior technologies, their own unique management know-how and the strength to diversify their parent companies (can have many big customers).

What did not alter was the realistic appreciation of changing small business by scholars themselves, small business owners themselves and those involved in small business.

Immediately after the first oil crisis, the Research Association on Small Business (Chusho-kigyo Chosakai) conducted a survey by mailing, asking about the images of small business to which there were 867 respondents. The following were the result; very small and petty (43), low wages (37), subcontracting (33), one-man control (30), family-type of management (18), speedy and easy adaptability (16), workholic (14), lack of creditability (13), strong spirit of independence (12).

The respondents were asked to pick up three phrases out of thirty different phrases. As result, 252% of 300% were concentrated in ten expressions above by the 867 respondents.

Almost every people concerning small business were feeling small business had been growing and changing. However, the images of "small business" remained gloomy or dark. That was the situation of small business studies in the last part of the 1970's in Japan.

#### *V. Development of the Problems and Studies of Small Business —in the 1980's—*

##### **(1) The Third Industrial Revolution and small business in Japan**

The year 1980 was called the starting year of industrial-robots age. Japanese industry which could still maintain international competitiveness, after the two oil crises, successfully slimmed its organizations far beyond what generally call "rationalization of industry", and started innovation of operation and management toward FA (factory automation), OA (office automation). The great technological innovation which had been labelled "the Third Industrial Revolution" must have been going on over years, but the 1980's brought especially significant new phenomena. More specifically, the informatization (the real-time collection and processing of data and information, the development of new information media and so on) based on the rapid development of ME (micro-electronics), and the high-technologies, such as the numerically-controlled equipments, bio-technology, new materials, and the advanced software system which are the basis of the advanced technologies; all these would make up "a society with information networks" and this new society has been giving a great impact not only on various industries but also on small business.

First, the manufacturing system is transforming itself, let alone production of multiple lines of products in a small quantity, into the production system for multiple lines of product with varying quantity, that is, computer-integrated manufacturing system (CIM). During the decade beginning in 1955, uni- or specific-purpose machines were automated and during the following decade those machines were replaced by NC (numerically controlled) machines, MC (machining center), and industrial robots; thus a system of production to produce multiple products in small quantity became possible. Now, as mentioned above, we have a production line for multiple lines of products in varying quantity. In

this way, currently the total control from designing to production and shipping is being done by computers. (1) The integrated production system has been increasingly installed in a large firms. (a large firm tends to make its own components within itself.) (2) A large firm would require more stringently ever its own subcontractors and component vendors to keep the just-in-time schedules. For this to be done effectively, more and more networks would be installed. (3) All these would call for a drastic change in existing relationship between subcontractors and their parent companies. All these are predicted to occur in the near future.

Secondly, a significant fact is that small-scale entrepreneurs have played no less important roles in development of high-technologies as mentioned before. It can be safe that venture entrepreneurs have been very active in developing technologies. There are various kinds of venture entrepreneurs, such as independent entrepreneurs, subsidiaries and affiliates of large firms, entrepreneurs of hardware business and software venture business, and new entrepreneurs of large, medium or small sized business. The concept of small business as users, as developers and as producers of high-technologies has been widened.

Thirdly, there are still many small enterprises who can keep up with today's technological changes, let alone high technologies. Consequently, it has become very difficult for small business enterprises to keep on operation with the old technologies. Now they must constantly seek for technological information with keen interest.

## **(2) The restructuring of industries and its impact upon small business**

Particularly, since September 1985 when the Finance Ministers of the 5 great nations met and reached the resolution, the rapidly rising value of yen and the industrial restructuring have been giving a big impact on small business. The problem of small business in the 1980's would be focussed on the rising value of yen, the restructuring of industry, the technological innovation and the wider diffusion of informatization.

The basic factor which caused the drastic appreciation of yen was the too strong international competitiveness of Japanese industry, especially, of the manufactured products in mass-production system. Now it appears paradoxical of too-high productivity of Japanese industry in the sense that the international competitiveness of Japanese industry has been weakened to the extent of an increase in the value of yen. Japanese enterprises tried to shift one half of the increase in the value of yen to the prices in the foreign markets where Japanese industry export to and to lower the export prices by other half of the increase in the value of yen by reducing the production cost; in this way, Japanese enterprises have been trying to pull through the difficulties caused by the appreciated yen. This is the reason why we call this situation "the high yen and antlion (brining about one's own ruin)."

Large enterprise in Japan, without waiting for the Government's guidance under the new restructuring policy (from spring of 1986), have been aggressively and speedily trying to restructure themselves within their own organization. In this way large firms in Japan are gradually coming up with a common direction, that is, a new "strategy for international division of labour within the organization," on condition that they would have



used very drastic methods of rationalization, such as diversification without any cautious hesitation, branching out organization into other lines of business, strengthening of research and development placed under strong competition, through rationalization within organization, reduction of external costs by rationalization or reorganization of purchasing system, contracting-out system, and subcontracting system.

The bankruptcy itself of small business did not increase, but there is a trend to decrease. The number of bankruptcy of small business due to the appreciated yen was not so large as we had predicted. The number of closure, liquidation before going into bankruptcy of small business is increasing.

In fact, the difficulty that small business is facing now due to the higher yen was not the first experience for small business in Japan. Since the first oil crisis in 1973, under the ever changing conditions surrounding them forced small business face various difficulties which they had to cope with for their survival time and again; therefore, the current on-going restructuring may be considered as an extension of the changes in structure which had been proceeding on to the present. Consequently, those small enterprises which could have survived through the vicissitudes brought about by the changes in the industrial structure, were able to adjust themselves to the changing situation and take the changed situation as their new challenge and opportunity for further success. Thus, we can say that those small enterprises which had survived and those new small enterprises which were born out of the changed situation must have satisfied the necessary conditions for survival.

Though there are many points related to the above discussion, here a few important points will be given;

First, the question to be considered is what the subcontracting system in Japan will become right in the development of internal internationalization and multi-nationalization of large enterprises. As already pointed out before, there was a very significant growth of small subcontractors in their technology and management level; some of them tend to specialize independently on their own, and others, though still remaining under umbrella of some specific large parent enterprise, are trying to exploit their own market by taking an advantage of their own high level technology.

Now a question of transferability of "the Japanese-style subcontracting system" has been posed. In fact, some of Japanese factories which went to Europe and the U.S.A. have transplanted there this kind of subcontracting system. And they have proved to be successful to some extent. The question is: Can we say that this subcontracting system may apply to the world as a production system? Still can we say that this shows a dialectic development of that system or that such a transfer is an exportation of excessive competition and the principle of efficiency among Japanese companies?

Secondly, an rapid increase in the imports of the manufactured goods due to the higher yen has had a big impact on small business different from the impact in the past. The imports are not only the products of light industries, but also the manufactured products of medium quality, related components, semiprocessed products. This trend has stimulated Japanese enterprises to set up their plants in foreign countries.

Thirdly, the emerging new circumstances and conditions have been also stimulate

small enterprises to internationalize and to go multinational. Thus the new problems for small business are now as follows: direct investment in NIEs and in the advanced countries, joint ventures, various types of collaboration with foreign labour and many more.

In short, the increasing number of Japanese large firms have been going into the developing countries and the developed countries and have been trying to raise their competitiveness by the new international division of labour, which have been treating with "hollowing out" of Japanese industry and a drastic transformation of the industrial structure into that depending more and more on domestic market; a serious problem posed for small business is how small business will be able to cope with the difficulties it will face hereafter.

### **(3) The Industrial Restructuring and the Management Strategies of Small Business**

The "venture business" and the novel unique businesses which had appeared earlier like "extraterrestrial aliens," have become not so rare by this time because of a tremendous growth of small business in general. Small business has grown so robust that many of small businesses can formulate their own management strategies which are highly diverse. I made interviews with small business managers at random in accordance with the introduction by a certain financial institution. I was very much surprised with the fact that those managers displayed uniquely individualistic strategy making ability.

I have been making this kind of interviews every several years. A small factory which was once a machining-work factory, moved part of the facilities of the factory to an industrial park and started to manufacture components for an assembly and, on the other hand, it developed an equipment to machine in collaboration with other machine makers. Later it merchandised its own MC (machining-center) equipment based on its own experience of making a uni-purpose machine. This kind of example is no longer rare by now.

However, facing the rapid industrial restructuring, small business is required to develop more effective strategy than before. SAKAMOTO (1987) said, "What should small business do now? There is only one answer to it. Small entrepreneurs must carefully watch any change in the policy of customers who make up the market for them and the local industry which have been altered radically by the higher yen and internationalization; there is only one way which they can take, that is, they must continue to transform themselves on their own to meet the needs of the new markets." Their transformations must be in the direction of: (1) aiming at developing into small yet strong "world enterprise" well supported by high technologies. (2) developing aggressively the overseas operation with its own volition. (3) endeavoring to be more free from their parent firms by becoming self-supporting and independent.

"Larger firms are not likely to undergo the 'hollowing out' of some of their American counterparts, but the landscape could be littered with empty shells of smaller companies." (Frost (1987), pp. 53-54) Excessive competition, rapid change in technology, competition from large business, higher labour costs, lack of management know-how, lack

of appropriate information. These are the difficult problems small entrepreneurs are facing now. On the other hand, the more progressive and enlightened small entrepreneurs are very aggressive in working at management strategies; development of international operation, active participation in information network, cross-exchange of different line of business, product development in cooperation with parent companies, transformation from subcontractors to OEM (original equipment manufacturers).

Naturally, not all small entrepreneurs are making such "a quantum leap." Small business has been, are, and will be always heterogeneous and pluralistic. But it is time for us to appreciate fully the general improvement of small business in Japan.

## *VI. Conclusion—The Achievement Point of Small Business and the Themes for Future Study*

### **(1) Diversification of the "problems" and "study" of small business**

The Small and Medium Enterprise Agency (1980) has taken a forward looking view of small business which was reflected in the statement made by it ever since it published a book entitled "Re-discovery of Small Business (The vision of small business in the 1980's)": "Small business has successfully ridden out many hardships and difficulties by making bold use of its own potential creativity and maneuverability." "Small business is no longer regarded passively as a necessary evil, but is regarded as an active actor in assuming an important part in Japanese economy." (Introduction and Preface.)

The time has come now that the information on business operation can be communicated on real time even from the other side of the earth. Even the information on sales on the store floor can be centrally controlled by information network.

Those workshops where the workers travailed for a single aim of reducing costs would disappear in Japan. Only those small business which would "operate with brain" would not lose their competitiveness, even if the rate of operation goes down and a three-day-a-week work system is introduced. Only these enterprise would survive. Those small enterprises where the workers must "work with sweat" are forced to go overseas. Those small enterprises which would discard strong dependency only on cost reduction for survival would have a much potential for growth. Only those highly flexible and easily adaptable medium and small enterprises can focus speedily their sight for the technological development on non-price competition. We cannot say that these above-mentioned prognostications are wholly unrealistic.

### **(2) Concluding remarks**

The achievement apex where Japanese small business reached is "the fact that in the economic growth that had lasted for such a long time, the stable growth after that, and the process of industrial restructuring, many small industries have raised their technological level and management level and that they have grown to such an extent that they could make their unique management strategies of their own."

Even if they may be called "subcontractors of large firm", they no longer captive to any large firm, but they have grown into such a status of business enterprise that they

rank with larger firms in terms of management resources and strength.

But as I have repeatedly stressed, small businesses are heterogeneous and pluralistic. They are not homogeneous in terms of the lines of business, the business pattern, location, ages and management philosophy and others.

Then the achievement apex for the problems of small enterprises could be clearly explained by the following statement; "Japanese economy and society have finally caught up with the developed and industrially advanced nations and, moreover, Japan itself has become a rightful member of the community of those advanced nations, and Japan now even surpassed other advanced nations in terms of the industrial power, technologies, and management, research and development and other areas. The problems of small business are at this point referred to those problems brought about because of its current position under the circumstances and also brought about in its relations with other enterprises and other social problems." However, we cannot say that "domination and exploitation of small business by larger business," "the differentials between large and small business," "the bottom and low wages in the dual structure" and other expressions which indicate the problems in the past, have entirely disappeared. Yet, under the conditions of the higher income level and the economy with shortage of labour in the society as a whole and in the stormy process of further internationalization and informatization, technological innovations, restructuring, how small business can make its new strategies for its survival is clearly becoming "a great problem" for small business.

I personally think that the major themes for further research and study on small business today are as follows:

- (1) To pursue the actual changing conditions of small business and the trend of change under circumstances described above as much on real time as possible and to grasp the direction in which it is going and to develop a theory on dynamic policy of how small business should be.
- (2) To formulate "a theory or a logic" on the basis of which we can correctly follow up the actual conditions and trend of small business. There exists only the real world out of which we must "theorize" or "seek for a logic to explain the changes" of small business.
- (3) To try on a continuing basis to assess and appreciate the position and role of Japanese small business in the world scene, in the midst of internationalization of small business, considering the possibility of transferring the experience of Japanese small business know-how to other countries.
- (4) To realize and emphasize that small businesses which are carriers of their own problems are also problem solvers and performers on their own way. Accordingly, in this sense, though small enterprises may still remain to be a high risk, we can recognize them as good place to work for people with dreams and hopes. We must explore a possibility for cross-transfer of different lines of business, cross-breeding and fusion of different technologies.
- (5) In relation with the theoretical study of economics, it has been reconfirmed that "small business" offers a source for relevant materials for the study of dynamic industrial organization and introducing dynamism in the study of oligopoly.

It is a characteristic in the study of small business to have numerous ways of study and multitudinous cross-sections of study. This is an excellent area for field study. There is no specialized academic discipline for study of small business. But I would like to pursue the study of small business by closely attaching myself to the reality with the global frame of reference, seeking for “the unified law of understanding all small business in the world scene as one whole,” as late Professor YAMANAKA Tokutaro had proposed.

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## Appendix 2. (Annotated Statistics)

Table (A). Number of Small Business Establishment by Sector, in 1960, 72, 81, 86. (private)

Sector	1960	%	1972	%	1981	%	1986	%
Mining	9,553	0.3	8,305	0.2	6,941	0.1	5,980	0.1
Construction	195,220	5.5	409,520	8.1	550,044	8.8	575,957	8.9
Manufacturing	549,778	15.5	788,619	15.5	868,334	13.9	870,262	13.5
Wholesale/Retailing	1,845,470	52.0	2,506,601	49.3	3,011,216	48.3	3,030,074	47.0
Banking/Insurance	51,119	1.4	61,468	1.2	83,259	1.3	94,264	1.5
Real Estate	38,472	1.1	153,953	3.0	237,513	3.8	256,837	4.0
Transport/ Communica.	66,101	1.9	94,621	1.9	132,929	2.1	143,727	2.2
Electricity, Gas, Water	7,563	0.2	6,262	0.1	4,593	0.1	3,854	0.1
SService	786,230	22.2	1,053,880	20.7	1,334,709	21.4	1,467,168	22.8
Small est. Total	3,549,506	100.0	5,083,229	100.0	6,229,538	100.0	6,448,123	100.0
Non-primary Total	3,561,743		5,113,723		6,269,071		6,494,341	

**Table (B).** Number of Employees in Small Business Establishment  
by Sector, in 1960, 72, 81, 86. (private) (1,000)

Sector	1960	%	1972	%	1981	%	1986	%
Mining	176	1.0	119	0.4	98	0.3	78	0.2
Construction	1,424	7.7	3,594	11.8	4,714	12.7	4,597	11.6
Manufacturing	6,264	34.0	9,209	30.3	9,552	25.7	9,921	25.1
Wholesale/Retailing	6,214	33.7	10,053	33.1	12,976	34.9	13,635	34.5
Banking/Insurance	650	3.5	1,161	3.8	1,453	3.9	1,548	3.9
Real Estate	90	0.5	384	1.3	610	1.6	694	1.8
Transport/ Communica.	945	5.1	1,716	5.6	2,083	5.6	2,446	6.2
Electricity, Gas, Water	116	0.6	122	0.4	138	0.4	140	0.4
S Service	2,553	13.9	4,039	13.3	5,580	15.0	6,448	16.3
Small est. Total,	18,431	100.0	30,398	100.0	37,204	100.0	39,506	100.0
Non-primary Total	23,158		38,794		45,720		48,995	

Source: Management and Coordination Agency,  
Japanese Government, "Census of Establishment"

Note: The small and medium establishments in this table are those with less than 300 employees  
(wholesalers less than 100, retailers and services less than 50 employees).

Features observed:

(1) We have more than 6.4 million small business establishments, which accounts for a little more than 99% of all establishments and these can be considered approximately the numbers of small businesses in Japan.

(2) Except mining and electricity/gas/water, number of small and medium businesses have increased. In manufacturing, however, increases in the number of establishments has slowed down in the 1980's.

(3) Establishments in wholesale and retailing accounts for more than half of all establishments. At the same time, more than half of all the employees in small and medium business are in wholesale/retailing and service industries.

(4) Out of all the employees working in the non-primary private sector (49 millions), more than 80% are employed in small and medium businesses.

In the last 26 years, people working in small and medium business have been increasing and at the same time the ratio of them to total employments has increased.

Note that a quarter of all the small business employees are in the manufacturing sector in the recent years.

Table (C). Small Establishments in Manufacturing by Industry  
Classification, 1966, 78, 83.

Manufacturing	1966	%	1978	%	1983	%	66-78	78-83
							%	%
Food/Kindred	97,168	16.4	84,978	11.5	83,098	10.7	-12.5	-2.2
Textile	104,953	17.8	106,500	14.4	99,210	12.8	1.5	-6.8
Apparel/Textile Goods	28,038	4.7	46,147	6.2	52,640	6.8	64.6	14.1
Lumber/Wooden-goods	52,489	8.9	43,898	5.9	39,517	5.1	-16.4	-10.0
Furniture/Equipment	33,557	5.7	41,977	5.7	44,626	5.7	25.1	6.3
Pulp/paper: Products	17,132	2.9	17,992	2.4	17,812	2.3	5.0	-1.0
Publishing, Printing	24,651	4.2	43,889	5.9	51,404	6.6	78.0	17.1
Chemicals	6,919	1.2	5,533	0.7	5,925	0.8	-20.0	7.1
Petroleum/Coal Produ.	681	0.1	906	0.1	1,120	0.1	33.0	23.6
Rubber: Products	3,384	0.6	7,435	1.0	8,743	1.1	119.7	17.6
Leather: Products, and Fur	8,530	1.4	12,307	1.7	13,025	1.7	44.3	5.8
Clay/Stone	27,958	4.7	33,383	4.5	33,692	4.3	19.4	0.9
Iron and Steel	6,234	1.1	9,024	1.2	9,062	1.2	44.8	0.4
Non-ferrous Metals	3,781	0.6	5,749	0.8	6,136	0.8	52.0	6.7
Metal-working	53,865	9.1	89,270	12.0	93,745	12.1	65.7	5.0
Industrial Machines (including weapon)	36,181	6.1	61,534	8.3	71,572	9.2	70.1	16.3
Electrical Machinery	15,845	2.7	32,634	4.4	40,049	5.2	106.0	22.7
Transportation Machi.	13,889	2.3	21,676	2.9	23,172	3.0	56.1	6.9
Precision Machinery	7,776	1.3	12,324	1.7	12,728	1.6	58.5	3.3
Other Manufacturing	48,181	8.1	63,688	8.6	69,445	8.9	32.2	9.0
Manufacturing Total	591,212	100.0	740,844	100.0	776,721	100.0	25.3	4.8

Source: Ministry of International Trade and Industry,  
"Industrial Census".

Note: The Standard Industry Classification has been revised several times, and so, strictly speaking, there is some inconsistency in the data.

Features observed:

- (1) In almost all the manufacturing industries, small and medium establishments have been growing in number, except Food and kindred, Lumber and wooden-products, and Chemicals (to some extent).
- (2) The year 1966 was the peak point of the rapid Japanese economic growth, 1978 was amidst the second oil crisis, 1983 was in the industrial adjustment period of Japan, together with technological innovation, informatization, internationalization, etc., although the ratio of economic growth declined remarkably 1978-83.
- (3) Machinery industries, Metal-working, Apparel and textile products, and Printing were the typical growing-industries.
- (4) The one third of small manufacturing establishments are in Metal-working and Machinery industries. And the one fifth are in Textile and Apparel.
- (5) We can observe the traditional small industry sector, such as Lumber/wooden-products, Textile are stagnant or declining, because the rapidly industrializing NIES are getting the advantages in production costs.

**Table (D).** Employees of Small Establishments in Manufacturing by Industry  
Classification, 1966, 78, 83.

Manufacturing	1966	%	1978	%	1983	%	66-78	78-83
							%	%
Food/Kindred	982,206	13.7	1,013,717	12.7	1,049,716	12.5	3.2	3.6
Textile	990,741	13.8	745,462	9.4	682,256	8.1	-24.8	-8.5
Apparel/textile Goods	319,044	4.4	532,237	6.7	558,749	6.7	66.8	5.0
Lumber/Wooden-goods	515,972	7.2	396,505	5.0	321,822	3.8	-23.2	-18.8
Furniture/Equipment	254,501	3.5	293,318	3.7	283,963	3.4	15.3	-3.2
Pulp/Paper: Products	255,511	3.6	240,657	3.0	242,102	2.9	-5.8	0.6
Publishing, Printing	337,799	4.7	416,832	5.2	470,402	5.6	23.4	12.9
Chemicals	203,727	2.8	198,247	2.5	211,214	2.5	-2.7	6.5
Petroleum/Coal Produ.	19,715	0.3	14,496	0.2	16,393	0.2	-26.5	13.1
Rubber: Products	70,830	1.0	91,607	1.1	105,342	1.3	29.3	15.0
Leather: Products, and Fur	70,138	1.0	89,302	1.1	88,528	1.1	27.3	-0.9
Clay/Stone	404,248	5.6	455,668	5.7	435,434	5.2	12.7	-4.4
Iron and Steel	181,287	2.5	179,510	2.3	174,716	2.1	-1.0	-2.7
Non-ferrous Metals	79,818	1.1	93,943	1.2	99,107	1.2	17.7	5.5
Metal-working	606,843	8.5	748,310	9.4	780,451	9.3	23.3	4.3
Industrial Machines (including weapon)	633,523	8.8	711,207	8.9	797,916	9.5	12.3	12.2
Electrical Machinery	416,940	5.8	681,520	8.6	915,052	10.9	63.5	34.3
Transportation Machi.	262,404	3.7	337,191	4.2	360,207	4.3	28.5	6.8
Precision Machinery	125,555	1.7	166,557	2.1	180,402	2.2	32.7	8.3
Other Manufacturing	445,764	6.2	560,541	7.0	615,991	7.3	25.7	9.9
Manufacturing Total	7,176,566	100.0	7,966,827	100.0	8,389,763	100.0	11.0	5.3

Source: Ministry of International Trade and Industry, "Industrial Census".

Note: The Standard Industry Classification has been revised several times, and so, strictly speaking, there is some inconsistency in the data.

Features observed:

- (1) In almost all the manufacturing industries, employees of small and medium establishments have been growing in number, except Textile, Lumber and wooden-products, and Chemicals, Petroleum/coal products (especially '66-78).
- (2) As it was explained in Table (C), the year 1966 was the peak point of the rapid Japanese economic growth. 1978 was amidst the second oil crisis. 1983 was in the industrial adjustment period of Japan, together with technological innovation, informatization, internationalization, etc., although the ratio of economic growth declined remarkably 1978-83.
- (3) Electrical machinery industry, Industrial machines, and Printing are the typical growing-industries from the point of employment.
- (4) The one third of small manufacturing employments are in Metal-working and Machinery industries. And about 15% are in Textile and Apparel.
- (5) We observe the traditional small industry sector, such as Lumber/wooden-products, Textile are stagnant or declining in employment, because of the same reason as mentioned at Table (C).

**Table (E).** Number of Establishments and Employees  
in Manufacturing, 1960, 69, 78, 83.

	Employees	1960	%	1969	%	1978	%	1983	ratio %
Number of Establishments	1~ 9	345,673	71.0	475,058	73.4	569,866	76.6	595,686	76.3
	10~ 19	71,079	14.6	88,773	13.7	83,689	11.2	87,088	11.2
	20~ 99	59,882	12.3	67,824	10.5	77,058	10.4	83,028	10.6
	100~299	7,588	1.6	11,096	1.8	10,231	1.4	10,919	1.4
	300~999	2,210	0.5	3,297	0.5	2,820	0.4	2,909	0.4
	1,000~	618	0.1	878	0.1	673	0.1	650	0.1
	Total	487,050	100.0	646,926	100.0	744,337	100.0	780,280	100.0
Number of Employees	1~ 9	1,194	14.6	1,892	16.6	2,178	20.0	2,248	19.8
	10~ 19	960	11.8	1,263	11.1	1,152	10.6	1,196	10.5
	20~ 99	2,295	28.1	2,795	24.5	2,987	27.4	3,184	28.1
	100~299	1,231	15.1	1,794	15.7	1,651	15.2	1,762	15.5
	300~999	1,115	13.6	1,676	14.7	1,412	13.0	1,463	12.9
	1,000~	1,374	16.8	1,992	17.5	1,512	13.9	1,495	13.2
	Total	8,169	100.0	11,412	100.0	10,890	100.0	11,347	100.0

Source: Ministry of International Trade and Industry (MITI), "Industrial Census".

Note: 1960 and the others are somewhat inconsistent because of the coverage.

Features observed:

- (1) 99.5% of the total establishments are small and medium scale (less than 299 employees). And the three fourth of all employees are working in those small establishments.
- (2) In 1970's and thereafter, the weights of small manufacturing establishments and the people working there have been increasing.
- (3) In 1960's and 1970's, we have observed the increase of very small establishments (with less than 10 employees).

Appendix 3-1. Number of Business, by Industry and Scale (private)

Industries	Scale	Small and Medium Enterprises		Large Enterprises		Total	
	Item	Count	Per-centage (%)	Count	Per-centage (%)	Count	Per-centage (%)
	Year						
Mining	1972	8,305	99.1	71	0.9	8,376	100.0
	1975	7,197	99.4	42	0.6	7,239	100.0
	1978	6,782	99.5	35	0.5	6,817	100.0
	1981	6,941	99.5	28	0.5	6,969	100.0
Construction	1972	409,520	99.8	683	0.2	410,203	100.0
	1975	446,516	99.9	520	0.1	447,036	100.0
	1978	494,889	99.9	456	0.1	495,345	100.0
	1981	550,044	99.9	425	0.1	550,469	100.0
Manufacturing	1972	788,619	99.4	4,763	0.6	793,383	100.0
	1975	809,309	99.5	4,324	0.5	813,633	100.0
	1978	837,093	99.5	4,039	0.5	841,132	100.0
	1981	868,334	99.5	4,064	0.5	872,398	100.0
Wholesale and Retail	1972	2,506,642	99.6	10,768	0.4	2,517,410	100.0
	1975	2,622,635	99.6	11,057	0.4	2,633,692	100.0
	1978	2,853,436	99.6	12,160	0.4	2,865,596	100.0
	1981	3,011,250	99.5	14,119	0.5	3,025,369	100.0
Financing and Insurance	1972	61,468	99.4	366	0.6	61,834	100.0
	1975	65,877	99.4	383	0.6	66,260	100.0
	1978	74,861	99.4	400	0.5	75,261	100.0
	1981	83,259	99.5	379	0.5	83,638	100.0
Real Estate	1972	153,953	100.0	35	0.0	153,988	100.0
	1975	176,565	100.0	23	0.0	176,588	100.0
	1978	213,310	100.0	21	0.0	213,331	100.0
	1981	237,513	100.0	27	0.0	237,540	100.0
Transportation and Communications	1972	94,621	99.4	577	0.6	95,198	100.0
	1975	104,627	99.5	506	0.5	105,133	100.0
	1978	114,568	99.5	528	0.5	115,096	100.0
	1981	132,929	99.6	480	0.4	133,409	100.0
Electricity, Gas, and Water Supply	1972	6,262	98.2	116	1.8	6,378	100.0
	1975	5,570	98.0	113	2.0	5,683	100.0
	1978	4,911	97.5	124	2.5	5,035	100.0
	1981	4,593	97.3	128	2.7	4,721	100.0
Services	1972	1,053,880	98.8	13,074	1.2	1,066,954	100.0
	1975	1,119,716	98.7	14,320	1.3	1,134,036	100.0
	1978	1,215,032	98.6	16,676	1.4	1,231,708	100.0
	1981	1,334,709	98.5	19,849	1.5	1,354,558	100.0
All Primary Industries	1972	5,083,270	99.4	30,453	0.6	5,113,723	100.0
	1975	5,358,012	99.4	31,288	0.6	5,389,300	100.0
	1978	5,814,882	99.4	34,439	0.6	5,849,321	100.0
	1981	6,229,572	99.4	39,499	0.6	6,269,071	100.0

Source: Coordinating Agency: "Business Statistics"

Note: Companies whose employees number less than 300 (or less than 100 in wholesale, or less than 50 in retail and services) were regarded as small/medium enterprises.

Appendix 3-2. Number of Employees, by Industry and Scale (private)

Item Industries	Year	Small and Medium Enterprises		Large Enterprises		Total	
		Count	Per-centage (%)	Count	Per-centage (%)	Count	Per-centage (%)
Mining	1972	118,518	63.5	68,090	36.5	186,608	100.0
	1975	101,449	69.4	44,749	30.6	146,198	100.0
	1978	93,841	70.4	39,501	29.6	133,342	100.0
	1981	97,590	75.9	30,938	24.1	128,528	100.0
Construction	1972	3,594,476	90.3	386,636	9.7	3,981,112	100.0
	1975	3,865,989	92.9	294,738	7.1	4,160,727	100.0
	1978	4,349,173	94.2	267,176	5.8	4,616,349	100.0
	1981	4,714,388	95.3	234,366	4.7	4,948,754	100.0
Manufacturing	1972	9,209,146	69.2	4,088,508	30.8	13,297,654	100.0
	1975	8,929,279	70.5	3,734,632	29.5	12,663,911	100.0
	1978	9,194,642	73.5	3,314,464	26.5	12,509,106	100.0
	1981	9,551,914	74.3	3,311,003	25.7	12,862,917	100.0
Wholesale and Retail	1972	10,056,035	86.0	1,634,808	14.0	11,690,843	100.0
	1975	10,703,352	86.8	1,625,283	13.2	12,328,635	100.0
	1978	11,868,673	87.6	1,686,972	12.4	13,555,645	100.0
	1981	12,978,043	87.4	1,872,195	12.6	14,850,238	100.0
Financing and Insurance	1972	1,160,649	83.3	232,318	16.7	1,392,967	100.0
	1975	1,238,605	82.6	260,858	17.4	1,499,463	100.0
	1978	1,356,899	83.6	267,017	16.4	1,623,916	100.0
	1981	1,453,073	85.9	237,624	14.1	1,690,697	100.0
Real Estate	1972	384,242	96.0	15,849	4.0	400,091	100.0
	1975	453,726	97.6	11,133	2.4	464,859	100.0
	1978	516,843	98.0	10,517	2.0	527,360	100.0
	1981	609,574	97.6	15,127	2.4	624,701	100.0
Transportation and Communications	1972	1,716,437	83.9	329,055	16.1	2,045,492	100.0
	1975	1,750,712	85.6	293,879	14.4	2,044,591	100.0
	1978	1,877,206	86.5	293,592	13.5	2,170,798	100.0
	1981	2,083,364	88.8	263,894	11.2	2,347,258	100.0
Electricity, Gas, and Water Supply	1972	121,839	66.1	62,592	33.9	184,431	100.0
	1975	125,433	63.3	72,864	36.7	198,297	100.0
	1978	132,621	65.9	68,698	34.1	201,319	100.0
	1981	138,361	66.5	69,731	33.5	208,092	100.0
Services	1972	4,039,149	71.9	1,575,536	28.1	5,614,685	100.0
	1975	4,361,494	71.1	1,773,001	28.9	6,134,495	100.0
	1978	4,899,257	70.4	2,058,351	29.6	6,957,608	100.0
	1981	5,579,852	69.2	2,479,153	30.8	8,059,005	100.0
All Primary Industries	1972	30,400,491	78.4	8,393,392	21.6	38,793,883	100.0
	1975	31,530,039	79.5	8,111,137	20.5	39,641,176	100.0
	1978	34,289,155	81.1	8,006,288	18.9	42,295,443	100.0
	1981	37,206,159	81.4	8,514,031	18.6	45,720,190	100.0

Source: Coordinating Agency: "Business Statistics"

Note: Companies whose employees number less than 300 (or less than 100 in wholesale, or less than 50 in retail and services) were regarded as small/medium enterprises.

Appendix 3-3. Number of Business and Employees in the Manufacturing Industry

## (1) Businesses

Scale of Employment	Year	1978	1979	1980	1981	1982	1983	1984	1985
1 ~ 9		569,896	563,803	558,456	*251,777	*244,239	*262,348	*243,187	*253,590
10 ~ 19		83,689	83,782	83,038	83,004	87,368	87,088	86,454	84,502
20 ~ 99		77,058	77,933	79,104	82,430	82,204	83,028	84,339	85,093
100 ~ 299		10,231	10,295	10,514	10,663	10,659	10,919	11,354	11,549
300 ~ 999		2,820	2,851	2,864	2,930	2,873	2,909	2,995	3,081
1,000 or more		673	640	647	659	655	650	669	679
1 ~ 299		740,844	735,813	731,112	*432,874	*424,470	*443,383	*425,334	*434,734
300 or more		3,493	3,491	3,511	3,589	3,528	3,559	3,664	3,760
Total		744,337	739,304	734,623	*436,463	*427,998	*446,942	*428,998	*438,494

## (2) Employees

Scale of Employment	Year	1978	1979	1980	1981	1982	1983	1984	1985
1 ~ 9		2,178	2,159	2,143	* 1,508	* 1,469	* 1,552	* 1,459	* 1,510
10 ~ 19		1,152	1,153	1,145	1,209	1,201	1,916	1,188	1,168
20 ~ 99		2,987	3,013	3,044	3,163	3,151	3,184	3,240	3,283
100 ~ 299		1,651	1,659	1,697	1,720	1,719	1,762	1,822	1,851
300 ~ 999		1,412	1,426	1,437	1,468	1,442	1,463	1,494	1,539
1,000 or more		1,512	1,450	1,465	1,500	1,500	1,495	1,531	1,536
1 ~ 299		7,967	7,984	8,029	* 7,600	* 7,539	* 7,694	* 7,708	* 7,812
300 or more		2,923	2,876	2,902	* 2,968	2,942	2,957	3,025	3,074
Total		10,890	10,860	10,931	*10,568	*10,481	*10,651	*10,733	*10,886

Source: Ministry of International Trade and Industry: "Census of Manufactures"

Notes:

1. On a business basis

2. The figures in 1985 were derived from interim reports.

3. An asterisk indicates an aggregation of businesses with four or more employees.



Appendix 3-4. Value of Shipments by the Manufacturing Industry

(1) Actual Value									
Year		1978	1979	1980	1981	1982	1983	1984	1985
Scale of Employment									
1 ~ 9		11,844	12,938	14,000	* 12,067	* 12,131	* 12,911	* 12,768	* 13,457
10 ~ 19		10,831	11,932	13,173	14,185	14,376	14,547	15,011	15,181
20 ~ 99		36,941	41,631	47,155	50,061	51,343	52,708	56,214	58,365
100 ~ 299		28,251	31,492	37,321	38,728	40,379	41,813	44,711	46,998
300 ~ 999		35,262	40,606	49,824	51,540	52,159	53,394	57,038	60,047
1,000 or more		41,682	45,608	53,227	58,130	59,545	60,153	67,288	70,944
1 ~ 299		87,866	98,043	111,649	*115,042	*118,230	*121,979	*128,730	*134,001
300 or more		76,944	86,214	103,051	109,670	111,704	113,548	124,325	130,991
Total		164,810	184,257	214,700	*224,712	*229,934	*235,527	*253,030	*264,992

(2) Proportion									
Year		1978	1979	1980	1981	1982	1983	1984	1985
Scale of Employment									
1 ~ 9		7.2	7.0	6.5	* 5.4	* 5.3	* 5.5	* 5.0	* 5.1
10 ~ 19		6.6	6.5	6.1	6.3	6.3	6.2	5.9	5.7
20 ~ 99		22.4	22.6	22.0	22.3	22.3	22.4	22.2	22.0
100 ~ 299		17.1	17.1	17.4	17.2	17.6	17.8	17.7	17.7
300 ~ 999		21.4	22.0	23.2	23.0	22.7	22.7	22.5	22.7
1,000 or more		25.3	24.8	24.8	25.9	25.9	22.5	26.6	26.8
1 ~ 299		53.3	53.2	52.0	* 51.1	* 51.4	* 51.8	* 50.9	* 50.6
300 or more		46.7	46.8	48.0	48.9	48.6	48.2	49.1	49.4
Total		100.0	100.0	100.0	*100.0	*100.0	*100.0	*100.0	*100.0

Source: Ministry of International Trade and Industry: "Census of Manufactures"

Notes:

1. On a business basis

2. The figures in 1985 were derived from interim reports.

3. An asterisk indicates an aggregation of businesses with four or more employees.

Appendix 3-5. Productivity of Value Added in the Manufacturing Industry

(1) Actual Value (The annual value added per employee)									
Year Scale of Employment	1978	1979	1980	1981	1982	1983	1984	1985	(thousand yen)
1 ~ 3	2,679	2,962	3,178	3,800	3,949	4,021	4,251	4,386	
4 ~ 9	3,853	4,260	4,660	4,752	4,889	4,992	5,216	5,376	
10 ~ 19	4,396	4,862	5,266	5,430	5,642	5,773	6,104	6,346	
20 ~ 99	5,916	6,506	7,190	7,264	7,654	7,834	8,234	8,539	
100 ~ 299	7,553	8,923	9,852	9,799	10,178	10,666	11,589	11,569	
300 ~ 999	8,822	10,568	11,400	11,762	12,629	12,814	14,008	15,006	
1,000 or more	4,163	4,607	5,029	*5,414	*5,651	*5,770	6,120	6,341	
(10 ~ 299)	(4,721)	(5,211)	(5,703)	(5,813)	(6,063)	(6,212)	(6,556)	(6,810)	
300 or more	8,209	9,752	10,634	10,701	11,428	11,752	12,814	13,286	
Average	5,249	5,966	6,517	*6,924	*7,272	*7,431	8,007	8,302	

  

(2) Differentials (compared to base figure of 100 for large enterprises)									
Year Scale of Employment	1978	1979	1980	1981	1982	1983	1984	1985	(percentage)
1 ~ 3	32.6	30.4	29.9	35.5	34.6	34.2	33.2	33.0	
4 ~ 9	46.9	43.7	43.8	44.4	42.8	42.5	40.7	40.5	
10 ~ 19	53.5	49.9	49.5	50.7	49.4	49.1	47.6	47.8	
20 ~ 99	72.1	66.7	67.6	67.9	67.0	66.7	64.3	64.3	
100 ~ 299	50.7	47.2	47.3	*50.6	*49.4	*49.1	*47.8	*47.7	
(10 ~ 299)	(57.5)	(53.4)	(53.6)	(54.3)	(53.1)	(52.9)	(51.2)	(51.3)	

Source: Ministry of International Trade and Industry: "Census of Manufactures"

Notes:

1. On a business basis

2. The figures of value added for the scale of one to nine persons are gross figures.

3. The figures in 1985 were derived from interim reports.

4. An asterisk indicates an aggregation of businesses with four or more employees.

Appendix 3-6. Per Capita Wages and Industrial Differentials

(1) Actual Value (cash wages per regular worker)											(yen)
Industry	Scale of Employment	Year									
		1979	1980	1981	1982	1983	1984	1985	1986		
All Industries	5 ~ 29	177,464	189,843	196,706	204,815	210,149	220,634	223,491	233,235		
	30 ~ 99	212,303	223,955	236,306	245,503	250,485	260,359	267,172	274,871		
	100 ~ 499	240,844	257,393	274,021	283,483	295,774	310,547	308,947	316,039		
	500 or more	285,916	307,884	327,184	341,258	355,785	372,206	385,716	390,601		
Manufacturing	5 ~ 29	162,515	171,706	179,231	186,614	192,829	204,751	203,034	212,755		
	30 ~ 99	181,514	193,516	205,395	210,948	218,128	225,272	232,667	239,958		
	100 ~ 499	221,800	238,256	251,576	259,556	269,361	284,135	285,006	288,773		
	500 or more	273,333	296,059	314,662	328,964	340,884	357,336	369,796	371,694		
Wholesale and Retail	5 ~ 29	171,112	182,923	187,298	198,087	197,376	208,910	208,543	216,169		
	30 ~ 99	207,357	214,928	220,230	225,126	228,013	238,445	249,379	254,541		
	100 ~ 499	225,214	242,911	260,807	267,909	279,315	293,334	284,376	289,481		
	500 or more	306,258	318,069	332,589	338,404	358,125	369,244	385,611	396,664		

(2) Differentials (compared to base figure of 100 for the scale of 500 or more)											(percentage)
Industry	Scale of Employment	Year									
		1979	1980	1981	1982	1983	1984	1985	1986		
All Industries	5 ~ 29	62.1	61.7	60.1	60.0	59.1	59.3	57.9	59.7		
	30 ~ 99	74.3	72.7	72.2	71.9	70.4	70.0	69.3	70.4		
	100 ~ 499	84.2	83.6	83.8	83.1	83.1	83.4	80.1	80.9		
	500 or more	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Manufacturing	5 ~ 29	59.5	58.0	57.0	56.7	56.6	57.3	54.9	57.2		
	30 ~ 99	66.4	65.4	65.3	64.1	64.0	63.0	62.9	64.6		
	100 ~ 499	81.1	80.5	80.0	78.9	79.0	79.5	77.1	77.7		
	500 or more	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		
Wholesale and Retail	5 ~ 29	55.9	57.5	56.3	57.1	55.1	56.6	54.1	54.5		
	30 ~ 99	67.7	67.6	66.2	66.5	63.7	64.6	64.7	64.2		
	100 ~ 499	73.5	76.4	78.4	79.2	78.0	79.4	73.7	73.0		
	500 or more	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0		

Source: Ministry of Labor: "The Monthly Statistic Survey on Labor"

Note: "All Industries" does not include service industries.