

Chapter 6

SMEs Under Recession in Japan

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SMES UNDER RECESSION IN JAPAN

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Abstract

Japanese small and medium enterprises (SMEs) have stood at the crossroads since 1991. After the Japanese yen was appreciated under the Plaza agreement in 1985, many large enterprises (LEs) shifted their labour-intensive processes from Japan to Asian countries, mainly China, to take advantage of local resources like cheap labour. Japanese LEs began not only to procure components and parts from the local market but also to import them to Japan from Asian countries. While some SMEs set up their factories in Asian countries, some SMEs lost their business chance to supply products to LEs.

Long-term recession forced LEs of machinery industries to review their procurement strategy. Manufacturers of automobile and electrical equipment changed their procurement strategy in three ways: by procuring components from companies under different groups, by reducing items of components, and by raising the share of components and parts produced in house. This rationalization of procurement by LEs led to the selection of only the efficient subcontractors and the termination of transaction with the inefficient ones. This change in procurement policy by LEs might have caused the bipolarization among SMEs in the four machinery industries.

SME policies in Japan have promoted the modernization and diversification of business of SMEs to keep up with changes in the industrial structure. In the 1960s, the government imposed several strict conditions on the modernization scheme of SMEs. In the 1980s, the government paid attention to initiatives of SMEs for diversification.

The paper offers four policy recommendations based on the review of SME policies in the different periods. First, SME policies can facilitate private sector initiatives. The government should not force business models like modernization policies. SMEs have the ability to adjust to new economic environment. Second, the entry of SMEs should be encouraged by providing special privileges such as subsidies, low interest loan, and tax concession as these can contribute to employment creation and entry of new industries. Third, local governments should play an active role in stimulating the local economy by promoting the growth and entry of new SMEs through relevant SME policies. Fourth, the law should regulate unfair trade. Under recession, many subcontractors have been unfairly treated in business transactions.

INTRODUCTION

Japanese small and medium enterprises (SMEs) have stood at the crossroads since 1991. After the Japanese yen was appreciated under the Plaza agreement in 1985, many large enterprises (LEs) shifted their labour-intensive processes from Japan to Asian countries, mainly China, to take advantage of local resources particularly cheap labour. Japanese LEs thus began not only to procure components and parts from the local market but also to import them from Asian countries to Japan. While some SMEs set up their factories in Asian countries, some SMEs lost their business chance to supply products to LEs. Moreover, the long-term recession forced LEs to review their procurement strategy, resulting in the reduction of suppliers particularly inefficient SMEs. These phenomena have caused the bipolarization of SMEs and resulted in the decline in number of SMEs in Japan.

This paper reviews and analyzes the SME policies implemented in the machinery industries, which consist of general machinery, electrical machinery, transportation equipment, and precision machinery. These industries accounted for half of the value added of the manufacturing sector in 2005. Typical subcontracting is observed in the electrical appliances and automobile industries.

The SME policies in Japan have promoted the modernization and diversification of business in SMEs to keep up with changes in the industrial structure. This paper examines the trends of SME policies in the various decades and the best practice in each decade. The final section provides some policy recommendations.

2. BUSINESS ENVIRONMENT OF JAPANESE SMEs

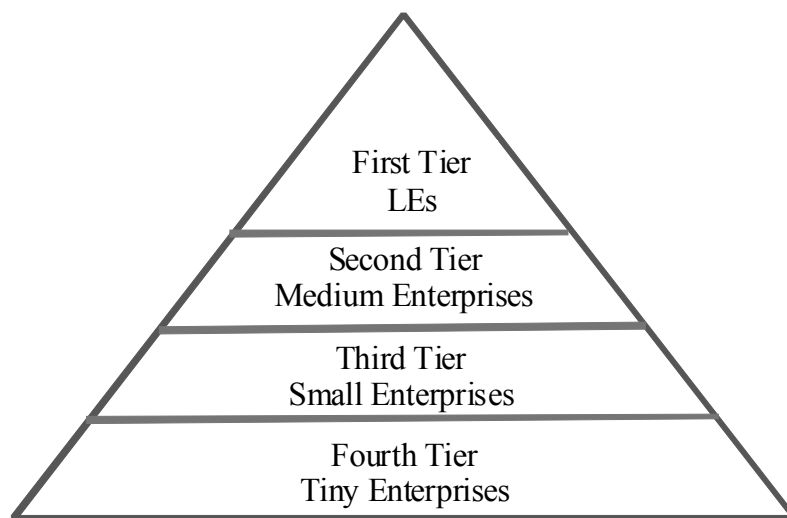
2.1 Trade with Asian countries and FDI by Japanese companies

In Japan, major electric, electronics, and automobile companies procure components and parts from three sources. First, they produce components and parts in their own factories using their own staff or resources. Second, they purchase components and parts from the market. The transactions with suppliers depend on market prices and are

usually short term in nature. Third, they purchase components and parts from subcontractors based on long-term relations. Subcontracting has played an important role in improving the efficiency of production systems. Each LE has established multitier subcontracting. This model has worked efficiently in Japan and can be considered the future of Japanese manufacturing.

Figure 1 shows a four-tier structure of subcontracting. In the top tier are the LEs, which include not only assemblers of electric appliances and automobiles but also manufacturers of complete components. They have factories assembling products in different areas. Clusters of SMEs specializing in specific products have been formed to supply to the factories of LEs. The rise and fall of clusters depend on the conditions of the factories.

Figure 1 Structure of subcontracting



Source: author

In the second tier are the medium enterprises that assemble components and supply them to LEs. Medium enterprises have three common abilities. First, medium enterprises have their own high technology, making them distinct from one another. Second, they can play a role of coordinator of small enterprises in the third tier. Medium enterprises procure parts from small enterprises and assemble these. As medium enterprises can control the quality and delivery of components and therefore can reduce

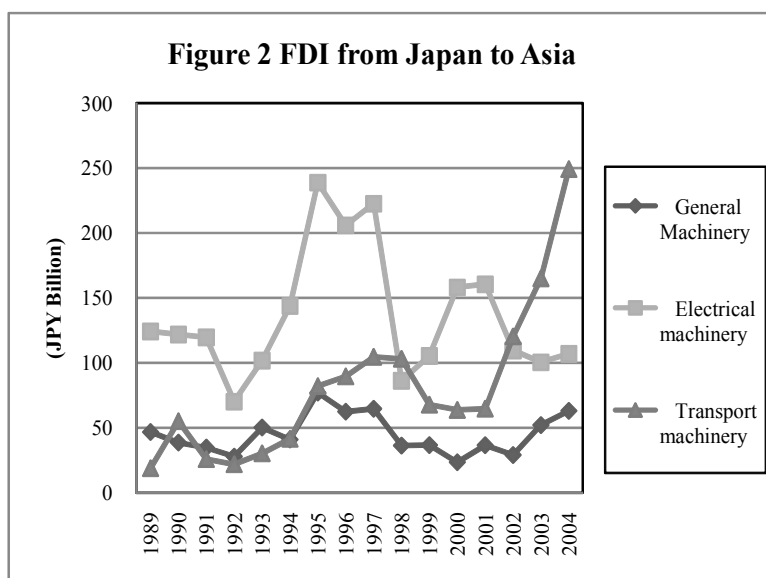
total production costs, LEs benefit by saving on overhead costs in controlling and coordinating small enterprises. In the case of Toyota, while more than 30,000 enterprises have an indirect linkage with it, it has a direct transaction with hundreds of enterprises. Third, medium enterprises have design ability. It is common for LEs to give rough designs to medium enterprises, which draw the specifications. LEs and medium enterprises codevelop components for new products in many cases.

Meanwhile, small enterprises in the third tier specialize in specific processes and produce parts. Tiny enterprises in the fourth tier are mostly family owned and managed, and take charge of relatively simple processes at low margin (Yoshida 1997). Due to their size, the management base of small and tiny enterprises is generally weak.

In the 1960s and 1970s, Asian countries pursued import-substitution policies. High tariff were levied on finished products of household electrical appliances and automobiles, and promotion policies were taken to develop domestic industries. Japanese LEs made use of joint ventures to establish knockdown plants in each country and targeted the local market.

In the 1980s, Asian countries switched to export-oriented industrial policies. Japanese manufacturers of electrical equipment and electronics increased investment to export processing zones in Korea and Taiwan and in Southeast Asia, as well as in special economic zones in China (SMEA 2006). Local content regulation and underdevelopment of supporting industries in Asian countries forced Japanese LEs to request subcontractors in the second tier to set up establishments near their factories in Asian countries. In this stage, SMEs in the third and fourth tiers were getting positive effects from foreign direct investment (FDI) because they could expand their supply to the LEs' domestic and overseas factories.

Japanese FDI to Asia increased dramatically after the appreciation of the yen in 1985. Some large LEs closed down their factories in Japan or shrunk production size. They also shifted their labour-intensive processes to Asian countries, mainly China, and began to import products processed in Asian countries and export to other Asian countries. Electrical machinery industries in Asia experienced a boom in FDI inflows in the mid-1990s while transport industries had it in the mid-2000s (Figure 2).



Source: Ministry of Finance, <http://www.mof.go.jp/english/e1c008.htm> (Accessed December 6, 2007).

Meanwhile, assemblers and manufacturers of components in the first tier began to procure parts and components from local and Japanese subcontractors within the same Asian countries and group companies in other Asian countries. Undoubtedly, as integration of the Asian economy progresses, the production network among Japanese, Korean and Taiwanese companies becomes interconnected resulting in the rise of robust interfirm trade among their factories in Asia.

The economic integration in Asia is reflected by the changes in trade pattern as can be observed in Japan, South Korea, and Taiwan (Table 1). They were importing raw material and exporting consumer goods in 1980 and importing consumer goods and components and parts and exporting components and parts in 2003. Between 1980 and 2003, while the share of raw material in total import and consumer goods in total exports went down clearly, that of components and parts in total imports and exports came up. The rapid increase of trade of components and parts among Asian countries suggests an increase of interfirm trade among factories of Japanese, Korean and Taiwanese LEs in Asian countries. Meanwhile, China is importing intermediate goods, including components and parts, and exporting capital and consumer goods. This indicates that China is assembling imported components and parts into final goods using cheap local labour and exporting them.

Table 1: Composition of trade goods in East Asian countries and regions according to production stage

(Percent)					
	Raw materials	Processed goods	Parts and Components	Capital goods	Consumer goods
Japan					
Export in 1980	0.7	24.7	13.8	28.2	32.5
Export in 1990	0.4	17.5	22.9	35.6	23.6
Export in 2003	0.6	20.7	32.6	25.8	20.4
Import in 1980	58.7	24.6	2.2	5.9	8.6
Import in 1990	30.1	31.8	6.4	7.5	24.1
Import in 2003	19.9	25.2	15.3	13.2	26.4
China					
Export in 1990	9.5	23.2	4.1	12.6	50.5
Export in 2003	2.3	16.9	15.1	23.8	41.9
Import in 1990	10	37.9	16.1	27.8	8.2
Import in 2003	11.9	34.5	27.2	21.8	4.6
South Korea					
Export in 1980	3	30.2	8.7	11.4	46.7
Export in 1990	1.3	25.1	15.8	16.7	41.2
Export in 2003	0.4	27.3	28	26.8	17.5
Import in 1980	48	26.6	8.5	14.3	2.6
Import in 1990	19.6	32.5	16.6	25.4	5.9
Import in 2003	19.5	33	23	15.3	9.2
Taiwan					
Export in 1990	0.8	27.6	16.9	19	35.7
Export in 2003	0.4	30.2	33.9	23.4	12.2
Import in 1990	16.3	37.2	17.9	17.6	11.1
Import in 2003	13.3	29.2	28.3	20.7	8.6

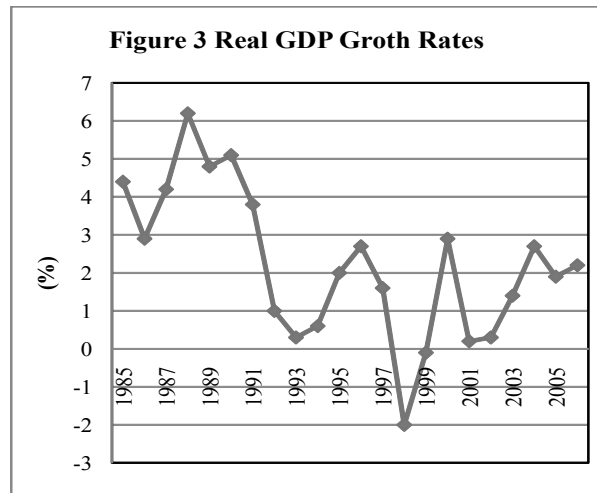
Notes: All trade goods are sorted by stage as raw materials, processed goods, parts and components, capital goods and consumer goods.

Source: METI (2005) *White Paper on International Economy and Trade 2005*.

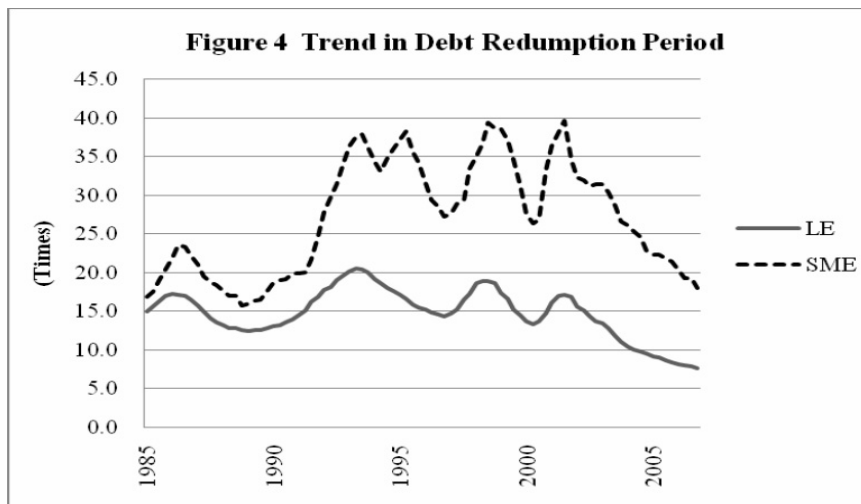
The increase of trade of components and parts may have different impacts on SMEs. Some SMEs can export their products and set up new factories in Asian countries to supply their products to overseas factories of Japanese LEs. However, some SMEs lack the capacity to do so. Many of them, in fact, have lost their customer base due to the closing down or shrinkage of LEs' factories in Japan. Some Japanese SMEs have lost their competitiveness in labour-intensive products due to the rise of wages and the appreciation of the yen.

2.2 Impacts of long-term recession

The Japanese economy has been facing long-term recession with deflation since 1991 (Figure 3). After the problem of nonperforming asset became serious, SMEs faced financial crunch due to the nonavailability of bank loan. The shrinkage of the domestic market affected the performance of the manufacturing sector. Reportedly, enterprises were burdened by the so-called “three excesses”, namely, excess debt, excess capacity, and excess employment.



Source: Cabinet Office, <http://www.esri.cao.go.jp/jp/sna/qe073/gdemenuja.html> (Accessed December 6, 2007)



Notes: As the target of the Financial Statements Statistics of Corporations by Industry are companies with more than 1 million capital, it does not cover many SMEs.

Source: Ministry of Finance (2007), *Financial Statements Statistics of Corporations by Industry*, <http://www.mof.go.jp/1c002.htm> (Accessed December 6, 2007)

The interest-bearing debt redemption period of SMEs and LEs was 16.8 years and 15.0 years at the end of the first quarter of 1985 (Figure 4).¹ During the economic boom, the period went down after it reached a peak in the first quarter of 1986. The gap between SMEs and LEs was less. The economic boom encouraged banks to increase long-term loan to SMEs. While recession decreased ordinary profit, long-term debt rose continuously and the debt redemption period came up rapidly in the second half of 1992. Although the debt redemption period of LEs rose, it was kept at less than 21 years. Banks did not have intent to restrict themselves from loaning to SMEs so that their loan would not become nonperforming asset. The decrease of long-term debt improved financial strength since 2001, suggesting that SMEs were forced to keep their capital investment within the scope of their cash flows due to financial institutions' unaccommodating lending attitude (SMEA 2006). It indicates, moreover, that with the accumulation of debt, some SME went bankrupt and ultimately disappeared from the statistics.

Table 2 suggests that tiny establishments in the fourth tier have declined. The number of establishments employing 4 to 29 employees declined from 380,892 in 1985 to 368,745 in 1991 or by 0.4 percent per annum. The trend accelerated after 1991 that it went down to 230,686 in 2005. Under the recession period after 1991, many establishments closed down. The number of smaller establishments decreased faster and even the number of establishments owned by LEs also went down. As expected, employment in SMEs also decreased; from 8.2 million in 1991, it went down to 5.8 million in 2005. Because SMEs accounted for a large share of establishments,

Table 2. Trends in labour productivity (%)

Size (Number of Employees)	Number of establishments		Number of employees		Value added		Labour productivity	
	1985	1991	1985	1991	1985	1991	1985	1991
	to	to	to	to	to	to	to	to
	1991	2005	1991	2005	1991	2005	1991	2005
4 to 29	-0.4	-3.6	0.1	-3.3	5.8	-2.1	5.7	1.3
30 to 99	0.9	-2.7	1.1	-2.5	6.5	-0.6	5.4	1.9
100 to 299	1.6	-1.4	1.7	-1.4	7.4	1.0	5.7	2.4
300 and above	0.8	-1.7	0.5	-2.8	0.8	-1.7	5.9	2.1
All	-0.2	-3.4	0.7	-2.6	6.5	-0.6	5.8	2.1

Source: METI, Census of Manufactures (various issues).

Table 3: Trends in employment in SMEs between 2001 and 2004

	Employment addition and reduction by existing establishment	Employment creation by newly organized establishment	Employment loss by abolished establishment	Change of employment
1 to 99	-231,495	367,582	710,239	-574,152
100 to 299	-57,692	118,371	160,149	-99,470
300 and above	-337,377	190,909	187,641	-334,109
Total	-626,564	676,862	1,058,029	-1,007,731

Source: MIAC (2006), *Establishment and Enterprise Census 2004*.

employment in manufacturing went down sharply from 11.4 million to 8.2 million during the same period. Conversely, labour productivity has grown in spite of the negative growth of value added.

The Establishment and Enterprise Census compared all private establishments in Japan between 2001 and 2004 and classified them into three categories: existing, newly organized, and abolished establishments.² During the period, employment by existing establishments decreased by 0.6 million (Table 3). While newly organized establishments created 0.7 million new employments, abolished establishments led to the displacement of 1.1 million employees. Small enterprises employing less than 100 employees and medium enterprises employing between 100 and 299 employees reduced employments mainly by abolishment. On the other hand, LEs employing 300 employees and more decreased employments mainly through the exit of existing enterprises. Exit of inefficient establishments improved labour productivity in SMEs while retrenchment of redundant labourers might have had the same effect on LEs.

Although many other factors have caused the decline in number of SMEs, long-term recession is still the main reason. Excess debt has seriously affected SMEs under the recession and made many SMEs to exit.

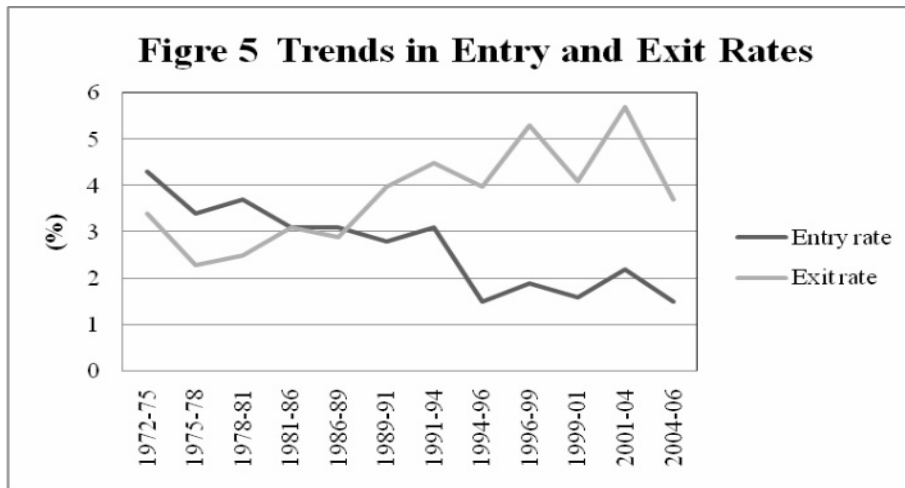
3. PROBLEMS OF JAPANESE SMES

3.1 Low entry rate and high exit rate³

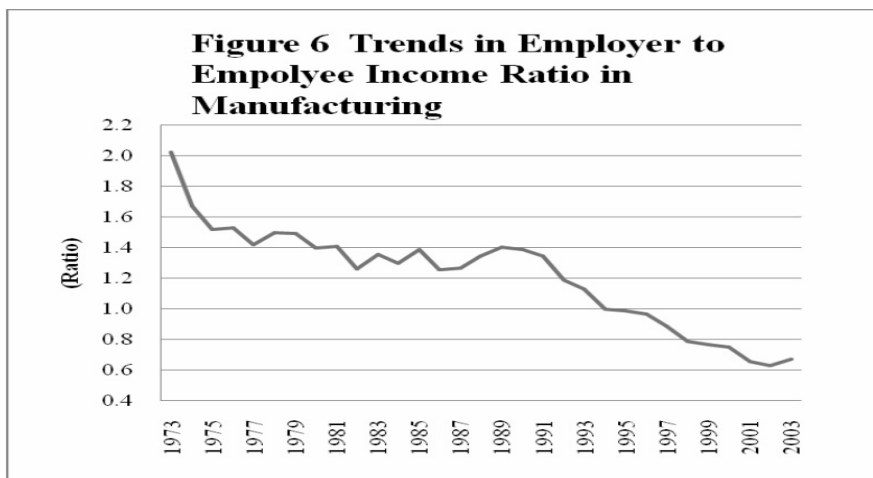
The entry and exit of SMEs create dynamism in economies. When labour-intensive industries decline in number due to the rise of wages, the entry of firms in capital-

intensive industries is expected. In Japan, SMEs have played an important role in changing the industrial structure. The sharp decline in number of establishments was caused not only by the abolishment of enterprises but also by the fewer number of enterprises entering the economy.

As shown in Figure 5, the entry rate experienced a prolonged decline since the 1970s. The main factor behind this appears to be the trend in sole proprietorship, which accounts for a huge number of Japanese enterprises. This phenomenon, however, should not be regarded entirely as a problem because sole proprietorships have the potential to grow and employ more persons.



Source: SMEA (2007) *White Paper on Small and Medium Enterprises in Japan 2007*
MIAC (2006) *Establishment and Enterprise Census 2004*



Source: SMEA (2005) *White Paper on Small and Medium Enterprises in Japan 2005*
MHLW *Basic Statistical Survey of Wage Structure* (various issues)
MIAC (2006) *Annual Report on the Unincorporated Enterprise Survey 2005*

The White Paper on Small and Medium Enterprises in Japan (SMEA 2005) points out a long-term downward trend in the employer-to-employee income ratio in manufacturing (Figure 6). It regards net operating profit per establishment as income of employers. The Ministry of Internal Affairs and Communications Annual Report on the Unincorporated Enterprise Survey has data on net operating profit including salaries for family workers per establishment. The Ministry of Health, Labour and Welfare's Basic Statistical Survey of Wage Structure has data on annual income of regular employees in establishments employing more than nine regular employees. Income of employees had risen in absolute level at enterprises of all sizes since 1974. This rise is more prominent than the rise in absolute level of entrepreneurs' incomes. The downturn in entrepreneurs' incomes in the 1990s accelerated the decline of the employer-to-employee income ratio. Annual net operating profit per establishment went down from JPY5.2 million in 1993 to JPY3.1 million in 2005. The relative decline in incomes of self-employed businesses appears to have reduced self-employment and decreased the entry rate.

Moreover, the young generation has been losing interest to set up enterprises or succeed in family business as it has a chance to get a high stable salary. The opportunity cost of entering a business varies according to each individual and to the time period as well. In the late 1960s and early 1970s, the peak of the age-wage curve for SMEs was the thirties age group. Many SME entrepreneurs set up their own factories in their thirties due to their meager salary (SMEA 1979). For many employees of SMEs who do not have a high education, starting their own business was a wise option as it was also difficult for them to get a job with a high stable salary. Entering a business was a chance to improve their income using their skills. Today, this generation is getting old but still many in that generation are still running their business as proprietors due to the absence of successors. In 2002, for instance, the age group 60 years old and above accounted for 43 percent of the total self-employed workers in Japan (MIAC 2003). Many SMEs have already abolished their establishments and some more are likely to follow owing to the lack of successors.

In addition, Japanese SMEs are facing stiff competition with cheap imported goods. Manufacturing SMEs cannot maintain their business without advanced technology and skill. The entry to manufacturing is thus becoming more difficult than it was during the 1960s.

3.2 Changing role of industrial clusters

As Japanese LEs transform into multinational companies, they become selective as to their place of investment because of their global strategy. Thus, regions throughout Japan have to compete with regions in Asia to attract investments. SMEs concentrate in some regions and form industrial clusters. The function performed by industrial clusters has also changed under the newly emerging international division of labour.

Industrial clusters can be grouped into four types according to how they were formed historically and according to their characteristics (SMEA 2006): (1) company town clusters, (2) production region clusters, (3) mixed urban clusters, and (4) mixed invitation clusters. The advantages of the business environment differ according to the type of cluster and have changed on the process of industrialization.

Company town clusters are formed by the agglomeration of numerous subcontractor groups around the mass production plant of a particular LE. A typical example is the area around Toyota city, which has Toyota Motor at its heart. Cluster regions have developed as a result of enterprises' minimization of the cost of expensive tasks such as production management and the acquisition of new customers, and their move to specialize in certain production processes. SMEs benefit from being within the same business groups with the LE. As clusters are affected by the difficulties experienced by LEs, SMEs are required to diversify their business. The traditional business model of being dependent on certain LEs and doing business within the cluster is not functioning as well as it used to be.

Production region clusters are formed by enterprises belonging to a specific industry such as consumer goods concentrating in a particular region, which have grown through their members' mutual use of raw materials and technologies that accumulated in that region. A typical example is Tsubame-Sanjyo region in Niigata Prefecture, where cutlery and blade manufacturers have clustered. SMEs receive orders through a joint order-taking system and have established a system of division of labour in the cluster to manufacture cheap, high-quality, mass-produced goods. However, tough competition with cheap goods produced in China have shrunk their domestic and export markets. The system of mass production, which has been a source of competitiveness before, appears to be performing less today. Heavy dependence on certain industries and the

highly segmented and specialized production processes prevent the clusters from adjusting to the new business environment.

Mixed urban clusters have formed in urban areas. There are many such clusters in the machinery and metalworking industries, and there often occurs division of labour between enterprises in the same cluster and business relations that cut across traditional industry groupings. Typical examples include Ota ward in Tokyo and Higashi-Osaka City. As it is difficult to establish systems of mass production in urban areas where cost of land and labour is relatively high, these clusters specialize in high value-added products. Production functions in such clusters are based on flexible divisions of labour as a result of the clustering of diverse industries and technologies. Consequently, the clusters have been able to respond flexibly to changes in the industrial structure under long-term recession. It is noteworthy that SMEs in the cluster have the production and process ability to deal with the product development and trial conducted by the LEs.

Mixed invitation clusters are formed as a result of local government efforts to attract enterprises and the implementation of industrial relocation plans. During the 1970s, the government regulated the size of factory sites in metropolitan areas and subsidized the transfer of factories to the rural areas. As many of the invited SMEs belong to industry groups outside the cluster, the collaboration within the clusters has not been very advanced. A typical example is the Kitakamigawa basin region. The clusters have developed because of labour-intensive plants locating in the region due to the attraction posed by orders they are getting from enterprises in that region and the comparatively cheaper labour there. Various SMEs have been added to these clusters such that they have become more complex and no longer dependent on a specific industry. However, some factories have withdrawn from the clusters due to the availability of cheaper labour in Asian countries. This shows that under globalization, cheap labour is fading as a competitive edge of clusters in Japan.

The above analysis suggests that diversification and collaboration that cut across traditional industry grouping are key points to establish flexible divisions of labour. Although the decline in number of SMEs has been a common phenomenon in all the clusters because of recession, some SME are still able to improve their profits by taking advantage of more flexible divisions of labour.

4. TRENDS IN THE JAPANESE MACHINERY INDUSTRY

Under long-term recession, electric and electronics companies like Sanyo and automobile companies such as Nissan, Mitsubishi, and Mazda faced serious financial difficulties so they closed down some of their factories. Many LEs of electric, electronics, and automobile industries changed their management strategy and reduced the size of weak and inefficient sections to focus more on the strong and efficient ones. This restructuring by LEs might have had an impact on SMEs in the machinery industries. In particular, the change in procurement strategy transformed the subcontracting system in Japan.

Japanese automobile companies, including major complete component manufacturers, changed their procurement strategy in three ways. First, they began to procure components from companies under different groups. Cross-group transaction among Japanese companies started in the US market. Denso in the US under Toyota began to supply fuel pump to Nissan in the US in 1990. Cross-group transaction then spread to the Japanese market. Moreover, automobile companies gave up their strategy of producing all components and parts within the same companies. They sold their nonearning subcontracting companies to other companies and concentrated on their performing sections.

Second, automobile manufacturers reduced items of components. During the economic boom in the second half of 1980s, they increased the number of models and items of components even in the same model to attract customers through product distinction. Naturally, this rose the man-hours in the assembly line, the research and development costs of components, and the production costs of components. Under recession, they tried to use common components for the different models to reduce items of components. Moreover, some companies tied up with different companies to share common components. In 1994, the government advised six manufacturers of the minicar to share common components. As the reduction of items induced the standardization of components, item-wise production lot increased and component manufacturers could enjoy economies of scale. Meanwhile, automobile assemblers

concentrated on efficient component manufacturers hence inefficient manufacturers began to lose clients.

Third, large automobile and component manufacturers raised the share of components and parts produced in house. They did this for several reasons (Yoshida 1997):

- The shrinkage of demand under the long-term recession made labourers redundant and their capacity underutilized. Thus, LEs which were previously outsourcing began to produce components and parts in house to use their redundant labourers.
- The standardization of components induced by the reduction of items made production of components in house more profitable due to economies of scale.
- The development of microelectronics reduced range of skill, which SMEs have an advantage on.
- Quality control and production management in house is easier. As development of technology reduced manhours in assembly lines, LEs got the needed space and labour force to produce components and parts in house.
- When LEs set up overseas factories, they may have difficulty in procuring components from local companies that follow the Japanese standard of cost, quality, and rigid delivery. They need experience to produce components by themselves. Thus, in the electronics and office machinery industries, some LEs raised the share of components and parts produced in house.

Table 4: Trends of labour productivity (%)

		Number of establishments		Number of employees		Value added		Labour productivity	
		1985 to 1991	1991 to 2005	1985 to 1991	1991 to 2005	1985 to 1991	1991 to 2005	1985 to 1991	1991 to 2005
General machinery	SME	1.3	-2.0	1.8	-1.4	7.6	0.3	5.8	1.7
	LE	2.2	-1.7	1.4	-2.4	6.6	-1.5	5.2	0.9
Electrical machinery	SME	1.1	-4.3	0.9	-3.3	10.2	3.9	9.4	7.3
	LE	1.9	-1.9	1.8	-3.5	10.9	3.5	9.1	6.9
Transportation machinery	SME	0.3	-1.8	1.1	-0.4	8.4	1.3	7.3	1.7
	LE	1.1	0	0.1	-0.7	7.2	2.9	7.1	3.7
Precision machinery	SME	-1.6	-3.1	-1.2	-2.6	3.8	-0.2	5	2.4
	LE	-1.3	-3.1	0.5	-4.7	2.1	0	1.7	4.7

Source: METI, *Census of Manufactures* (various issues).

The rationalization of procurement by LEs led to the selection of only the efficient subcontractors. They ended transaction with the inefficient ones. Efficient SMEs can get more orders and can invest to improve their capacity. The inefficient ones lost their business chance. As shown in Table 4, the value added of SMEs and LEs in electrical machinery and transportation machinery was growing between 1991 and 2005 in comparison with the other industries even under long-term recession. While the number of establishments and the number of employees decreased in the four industries between 1991 and 2005, labour productivity improved in both SMEs and LEs in the four industries. While the number of establishments in SMEs went down faster than that in LEs, the number of employees in SMEs declined slower than that in LEs. It is estimated that SMEs improved labour productivity mainly by the exit of inefficient companies while LEs did this mainly by retrenching employees. The change in procurement policy of LEs might have caused the bipolarization among SMEs in the four industries.

5. TRENDS OF SME POLICIES IN JAPAN

5.1 Basic tools of SME policies (1940s and 1950s)

Japan has a long history of SME policies. In the 19th century, policies were passed to protect cottage industries from imports. In 1947, the Act Concerning Prohibition of Private Monopoly and Maintenance of Fair Trade (the Japanese Antimonopoly Act) and the Law for Elimination of Excessive Concentration of Economic Power were enacted to implement measures for introducing a democratic economy. As part of the measures for SMEs and to prevent economic centralization, the Small and Medium Enterprise Agency was established in 1948 as an extra-ministerial bureau of the Ministry of Commerce and Industry. During the postwar recovery period, the basic tools for SME measures were prepared, including financial resources, cooperatives, and management consulting and guidance (SMEA 2007).

The government established three governmental SME financial institutions. The Shoko Chukin Bank was established in 1936, owned not only by the government but also by SME cooperatives, to provide comprehensive financial services to these

cooperatives and their members. The National Life Finance Corporation was established in 1949 to contribute toward development of the national economy and national life such as public health through the supply of small lot funds without collateral to small-scale enterprises. The Japan Finance Corporation for Small and Medium Enterprise (JASME) was established in 1953 to provide SMEs with fixed interest, long-term funds needed to promote SME projects but which general private institutions have difficulty of supplying.

Traditional financial institutions and cooperative financial institutions among SMEs were reorganized in 1951. The former became mutual loan and saving banks, which could operate as ordinal banks with limited regional operation and limited loan provision. The latter became Shinkin banks, which supply loan mainly for SMEs and can deal with deposits from nonmembers.

A Credit Guarantee Corporation (CGC) was established in each of the 45 prefectures and four major cities to make it easier for SMEs to raise funds from financial institutions by providing guarantees on loans. Under its loss compensation system, the CGCs compensate the financial institutions for losses incurred by financing SMEs under specific circumstances. The enactment of the Small Business Credit Insurance Law in 1950 made it possible for the government to directly insure loans to SMEs using government funds. In 1951, the Small Business Credit Insurance Law was partially revised, and credit insurance was used for the credit guarantees provided by CGCs. This led to the current Credit Supplementation System that combines credit guarantees with credit insurance. In 1953, the CGC Law was enacted, and this established the public status of CGCs as a government-backed corporation. The Small Business Credit Insurance Corporation was established in 1958 as a public corporation designed to reinsure guarantees of obligation by CGCs. The establishment of CGCs and injection of public funds into the CGCs have both contributed to the improvement and development of the Credit Supplementation System (National Federation of Credit Guarantee Corporations 2007). At present, JASME is taking over or guaranteeing outstanding loans to support money supply by general private financial institution and doing insurance for guaranteeing outstanding loans.

The SME Diagnosis System was introduced in 1948 to give advice to SMEs through state-qualified consultants. The government began to subsidize investment on

research institutes funded by prefecture and municipal governments from 1956, and training programmes for SMEs were organized by prefecture and municipal governments. The SME promotion system, which consisted of consulting, research and development (R&D), and training, was established.

Laws define the organization of SMEs. The Law on the Cooperative Association of Small and Medium Enterprise enacted in 1949 provides for a system for SMEs to complement insufficient business resources in technology, information, and human resources, among others, through the establishment of an organization and a joint approach to business based on the principle of mutual aid. On the other hand, the Law Concerning the Organization of Small and Medium Enterprise Organizations enacted in 1957 provides for commerce and industrial associations, which represent SMEs in the same industry as prefecture-wise trade association.

Considered best practice in this period was the introduction of the so-called “Blue Returns”. Since the old official assessment was replaced by the self-assessed taxation system after the Second World War, SMEs were in chaos due to incomplete bookkeeping and the fear of overtaxation. To resolve this situation, the Blue Returns system was began in 1949, allowing certain tax merits if a tax return is made with a “certain formula of quick bookkeeping”. This system resulted not only in the improvement of financial accounting but also in the strengthening of financing systems of SMEs (SMEA 2007).

5.2 SME modernization promotion in the 1960s

The Small and Medium Enterprise Basic Law was established in 1963 and considered the backbone of SME policies.⁴ Its policy concept was to rectify the gap between SMEs and LEs in terms of labour productivity by upgrading the structure of SMEs and improving the conditions of trade. The government also recognized that SMEs could not introduce modern technology given their small size and the excessive competition among them.

To solve the problem, policies that encouraged to optimize the size of establishments and make arrangements for joint operation in manufacturing among SMEs were enacted. The SME Modernization Promotion Law established in 1963 regarded SMEs as industry-wise groups and promoted the modernization of the SME

industry as a whole. The government identified the important industries relevant to upgrade the industrial structure and to improve international competitiveness. It also implemented SME modernization schemes that included the target of optimal size, quality of products, and production costs. SMEs committed to the target could enjoy low-interest SME modernization loan from JASME as well as accelerated depreciation of equipment. In 1969, the law introduced an SME structural improvement policy scheme to encourage joint operation among SMEs. Commercial and industrial associations made plans of undertaking joint operation. Participating SMEs could obtain loans whose interests were even lower than the SME modernization loan and whose repayment period was much longer. The SME Upgrade Loan Scheme was likewise introduced to encourage joint operation among SMEs by financing. The coverage of the scheme was expanded in 1961 to include establishments of industrial estates. If 20 SMEs in the same industry organized cooperative associations and established industrial estates, they could get financial assistance under the scheme.

The policies of SME modernization were not spared from problems. Three factors were identified as reasons. First, the policies concentrated much on modernization of equipment. When sales did not increase enough to recover the SMEs' investment in the new equipment, the investment for modernization became a burden for them. The policies also did not consider intangible investments such as in human resources and in R&D. Second, only wealthier SMEs could meet the modernization target set by the government as it was too high for the modest SMEs to achieve. The modernization policies did not consider the differences among SMEs in the same industry. As a result, only the wealthier SMEs could enjoy the benefits of the policies. Third, the policies did not give enough importance to the initiatives of SMEs. The idea of joint operation among SMEs was not realistic. As each SME has expertise on production process, joint operation has become difficult. Thus, SMEs have not been actively involved in joint operation. In fact, the low-interest loan that was set aside for joint operation was spent not on improving the production process but on setting up joint facilities like common parking lots and common meeting rooms (Kurose 2006).

Moreover, to protect subcontracting SMEs, cumulative amendments to the Law on the Prevention of Delay in the Payment of Subcontracting Charges and Related Matters strengthened regulations. The law was enacted in 1956 to restrict unfair

practices by parent companies such as the delay or reduction of subcontractors' payment and infringement of benefits. Then, in 1966, the Law on Ensuring the Receipt of Orders from the Government and Other Public Agencies by Small and Medium Enterprises was enacted to correct the business disadvantages of SMEs by obliging the government to set a target quantity of order for SMEs year by year.

Considered best practice in this period of modernization promotion was the industrial apartment programme. Under this programme, prefecture and municipal governments constructed industrial apartments and distributed or rented these to SMEs that did not have enough funds to construct their own factories. The success of the programme was due to two reasons. First, the programme was aimed at improving the production environment. Since the operation of SMEs in the apartment was not regulated by law so they could keep their own ways of production. Second, as these apartments were usually small, they can be constructed in urban areas. National location policies regulated the size of factories in big cities and reallocated them from populated areas to depopulated ones by providing tax concessions and subsidies. Large- and middle-size establishments therefore moved out from metropolitan areas such as Tokyo and Osaka to the rural areas. Local governments constructed industrial apartments in the lots where these large- and middle-size establishments were previously located. The apartments were suitable for small enterprises because they did not have enough money to transfer to another location to improve production environment.

The foregoing discussion shows that while the government can contribute much to the improvement of the production environment, it should not intervene in the operation (Kurose 2006). The industrial apartment programme is an effective way for SME factories and residences to coexist in metropolitan cities.

5.3 Structural change in the 1970s

In the 1970s, international economies changed dramatically. The sudden appreciation of the Japanese yen and the rapid increase of oil prices triggered recession and inflation in the Japanese economy. Moreover, Korean and Taiwan were quickly catching up with Japan in the export market of labour-intensive goods like garments and footwear. To address this, industrial policies tried to encourage new leading industries like electronics and the formation of a knowledge-intensive industrial structure. SME policies followed

industrial policies and encouraged knowledge intensification. The SME Upgrade Loan Scheme was applied to promote joint operation in R&D among SMEs. However, the effects of the policy were limited as joint operation for knowledge intensification by industry-wise cooperative associations and commerce and industrial associations was difficult. Most of the association members also did not exhibit serious interest in R&D given that the results of R&D investments are not immediate.

Some SME policies also promoted changing of business to encourage SMEs to abandon declining industries and to shift to the more promising ones. The government thus specified the industries that were facing problems due to competition from developing countries, appreciation of the yen, shrinkage of demand, and pollution regulation. Low-interest loan and liberal treatment of depreciation were provided to SMEs in the specified industries to diversify their business. In this programme, a strict condition to get the loan was set: the existing business should be shrunk to less than half and the new business should be expanded to more than half. The programme was not applied to diversification without shrinkage of existing business. Although the Japan Small Business Promotion Corporation set up an information center in all the prefectures to collect information and data on business for the SMEs, many of them had difficulty in finding new business for diversification.

Considered best practice in this period was the programme on small amount and low interest loan provided by National Life Finance Corporation to small enterprises. In 1973, it began to provide collateral- and guarantor-fee loan to small enterprises on the condition that the owner would join the training programme organized by the commerce and industry associations and the chamber of commerce and industry for six months. In the beginning, only small enterprises employing less than six employees could apply for the loan. The applicable size was later raised to enterprises employing less than 21 employees. This policy was implemented from the viewpoint of social policies. At the same time, the promotion of small enterprises became important to create employment under recession (Kurose 2006).

5.4 Change of policy concept in the 1980s

In the 1980s, trade conflicts with the US forced the Japanese government to open the economy. Under the Plaza agreement in 1985, the Japanese yen was appreciated.

Industrial structural policies were aimed at upgrading knowledge intensification and shrinkage of comparatively disadvantaged industries like petrochemical and paper to adjust to international economic environment. In addition, local economy policies made much of the initiatives in the regions. The government supported techno police plans made by local governments. The plans tried to create new towns, which consisted of high technology industries, research institutes, and residential areas, with the Silicon Valley in California as their model. Although they could not obtain good results, these were a sign of local initiatives for development.

Moreover, the government paid attention to the positive aspects of SMEs to create and develop new industries. The Temporary Law Concerning Measures for Changing Business for Specific Small and Medium Enterprises was enacted in 1986 to specify the type of industry for SMEs and to help convert businesses. The Temporary Law Concerning Measures for Small and Medium Enterprises of Specific Regions was enacted to promote the conversion of businesses of SMEs in specific regions heavily influenced by the economic depression and yen revaluation in the same year (SMEA 2007).

SME policies during the 1980s were noteworthy at four points. First, they tried to encourage R&D in SMEs rather than the diffusion of existing technology. SMEs could get low-interest loan from government financial institutions after local governments approved the technology development plans in the high technology areas such as electronics and biotechnology. Subsidies and tax concession were provided to R&D activities of SMEs. Second, training programmes were strengthened. Nine SME institutes⁵ were set up to give training to SME employers and employees during the 1980s. Third, the government recognized the effects of exchange and tie-ups among SMEs in different industries and began to encourage these. During the recession in the 1970s, SMEs in the machinery industry collaborated to produce high value-added products. The collaboration was effective for joint development of unit components. Thus, in 1981, the government started technology exchange plaza projects to organize exchange and tie-ups among SMEs in each prefecture. In 1988, the government began to subsidize and give tax concession to new technology development by cooperative associations among SMEs in different industries. Fourth, the government encouraged new project ideas. Prefecture and municipal governments and the private sector tied up

and set up business incubators to reactivate the declining local economy due to recession. Subsidy from the government and low-interest loan from government financial institutions were provided to incubator projects. However, the occupation ratio of incubator projects was low due to the high rents. This is because prefecture and municipal governments gave priority to the acquisition of subsidies from the government over careful examination on feasibility of projects.

5.5 Amendment to the Small and Medium Enterprise Basic Law

During the 1990s, business innovation and start-ups were emphasized in SME policies. The Temporary Law Concerning Measures for the Promotion of the Creative Business Activities of Small and Medium Enterprises was enacted in 1995. This law was designed to help SMEs and individuals start new business or invest in R&D without specifying any particular type of industry. The Small and Medium Enterprise Modernization Promotion Law and the Temporary Law Concerning Measures for Smooth Adaptation to Structural Changes in Economy by Advancement of Specific Small and Medium Enterprises to New Fields enacted in 1993 were integrated to become the new Law on Supporting Business Innovation of Small and Medium Enterprises in 1999. In this law, business innovation included not only the development and sale of new products and services, and the use of new production methods or product sales methods, but also the development and introduction of new business management methods. This law was not intended to direct SMEs to a specific direction in contrast to the Small and Medium Enterprise Modernization Promotion Law that forced SMEs to follow a uniform modernization scheme.

The Small and Medium Enterprise Basic Law was revised fundamentally in 1999. The policy concept had already been changed from modernization to business conversion in the 1980s. Moreover, business innovations and start-ups were encouraged in the 1990s. Amendment of the law confirmed the change of SME policies. The new Small and Medium Enterprise Basic Law was based on a new philosophy of promoting diverse and vigorous growth and the development of independent SMEs rather than rectifying the gaps. It has three key factors: promoting business innovation and new business start-ups, strengthening the management base of SMEs, and facilitating adaptation to economic and social changes. SME policies became competition oriented.

Moreover, the responsibility of municipal governments was defined in the law. Before the amendment, only the central and prefecture governments were involved in SME promotion.

In 2005, the Temporary Law Concerning Measures for the Promotion of the Creative Business Activities of Small and Medium Enterprises was enacted to promote business start-ups, business innovation, and exchange and tie-ups. Although the law superseded existing SME policies, the support system was strengthened. An expert team in each project was organized to support project planning and implementation. In addition, applicants may get low-interest loan automatically once the project has been approved by the ministry.

5.6 Role of the municipal government

SME policies cannot stop the long trend of SME decline under the recession. The exit of many SMEs has seriously affected the local economy. Some municipal governments have implemented local ordinance promoting SME development to activate the local economy. Municipal governments can play an important role in collecting information, interacting with SMEs, and organizing exchange among SMEs. Sumida ward was the first municipal government to implement a local ordinance on SME development in 1979. Sumida ward has been a cluster of apparel and machinery industries. The SME promotion policies of Sumida ward are unique at three points. First, the government set up a database containing pertinent information about SMEs in the ward. In 1977 and 1978, 180 employees of the ward office visited all 9,313 registered establishments to conduct a survey. They also carried out a hearing with personnel of the SMEs. The hearing was a good opportunity for employees of the ward office to understand the conditions of SMEs. The experience was useful in the development of a master plan of SME promotion in 1986, 1989, and 2003. Second, SME owners were given the opportunity to participate in policymaking. In 1980, the government set up the Industrial Promotion Committee, which consisted of SME owners, experts, and government employees. In consultation with the said committee, the government is running an SME center that has technical advisers and complete with expensive machine tools and instruments that SMEs in the ward can use. Third, SME promotion was strengthened by linking it to local tourism. The Industrial Promotion Committee recommended the

setting up of small museums to present the industry and culture of Sumida to local and foreign tourists as well as small shops at the corner of the factories to sell products made by Sumida SMEs. SME promotion thus became a part of policies to activate the local economy.

Some municipal governments have followed the best practice of Sumida. Based on the experience of Sumida, they have learned to give importance to SME promotion, tap local resources, and take into consideration the character of the local economy when making their plans. They likewise realized the importance of the interaction between the local government and SMEs to make their plans work.

6. RESULT OF FIELD SURVEY

The survey was conducted in Ota ward of Tokyo and in Southern Kyoto prefecture in May, June, and November of 2004. The target SMEs were selected mainly from the award-winning SMEs in Ota ward and Kyoto prefecture. Most of them are above-average SMEs in terms of standard qualities of SMEs and have unique traits. Table 5 shows the character of each company. Those in Ota ward have flexible divisions of labour as mentioned earlier. Although the government of Ota ward enacted local ordinance on SME development and has been actively promoting SME development, the number of SME establishments has declined beginning in the 1980s. After the factory sites in the metropolitan areas were regulated, some SMEs established their second factories for mass production in the rural areas while head factories concentrated on small-lot production related to R&D and trial. As South Kyoto is close to Osaka, subcontracting SMEs have developed in the area. Four points were found out from the survey.

First, most of the 20 SMEs have outstanding technology and special skills, and have established their brand name among their clients. With the high price of land and the high wages that are placing SMEs in the urban areas at a disadvantage, they must have unique sales points. Five SMEs have original products that other companies including LEs are not producing. Other SMEs also have special skills, which other t

Table 5: Characters of surveyed SMEs

Ota ward									
Products	Number of regular employees	Main customers	Location	Participation in cooperation	Relation with LEs	Diversification	Overseas affiliates	Other establishments in Japan	Award
Plating	80	Automobile, Electrical equipment	Industrial estate (Modernization Scheme)	Cooperative association (pollution control, R&D)	Supplier	Moulding		Ota ward	Excellent SME by Ota ward
Precise process	100	Electronics, Semiconductor	Own factory	Member of Tokyo Chamber of Commerce and Industry	Supplier	Second and Third factories		Rural area	Model of rationalization by SMEA
Electrical equipment	9	Power plant	One floor of private residence apartment		Subcontracting		China (Planning)		Excellent SME by Ota ward
Die	5	Machine manufacturers	Industrial apartment in Industrial estate						
Metal process	8	Semiconductor	Industrial apartment owned by Ota ward		Subcontracting				
Machine (Robot, etc.) manufacturing including R&D and software	12	Automobile	Industrial apartment owned by Ota ward	Joint R&D with SME and university	R&D on consignment	Development of new products		Rural area	

Products	Number of regular employees	Main customers	Location	Participation in cooperation	Relation with LEs	Diversification	Overseas affiliates	Other establishments in Japan	Award
Metal process	18	Electrical equipment	Own factory		Process of trial				
Metal process	45	Semiconductor	Own factory		Supplier				Excellent SME by Ota ward
Electrical equipment	25	Electrical equipment (R&D and sales)	Industrial apartment owned by Ota ward			Development of new products			
Precise process	20	Machine tool, Semiconductor	Own factory	Cooperative association	Subcontracting				Excellent SME by Ota ward
Metal process	46	Transportation equipment	Own factory		Subcontracting	heat treatment		Rural area	Excellent SME by Ota ward
Machine manufacturing	92	Automobile	Own factory		Supplier	Development of new products	Thailand		Excellent SME by Ota ward
Precise die and Press	120	Electrical equipment	Own factory	Joint R & D with university	Supplier	Production of machinery	Thailand Philippine China	Rural area	
Metal process	8	Semiconductor	Industrial apartment owned by Ota ward		Supplier				
Plating	12		Own factory						Excellent SME by Ota ward

Products	Number of regular employees	Main customers	Location	Participation in cooperation	Relation with LEs	Diversification	Overseas affiliates	Other establishments in Japan	Award
Machine manufacturing	11	Electrical equipment	Own factory		Supplier				Excellent SME by Ota ward
Machine manufacturing	37	Electrical equipment	Own factory		R&D on consignment	Engineering Production of trial			Excellent SME by Ota ward

Kyoto

Products	Number of regular employees	Main customers	Location	Participation in cooperation	Relation with LEs	Diversification	Overseas affiliates	Other establishments in Japan	Award
Precise die and Press	140	Semiconductor, Electrical equipment	Own factory	Exchange association among SMEs	Supplier	Production of machinery		Rural area	Model of rationalization by SMEA Excellent technology of SME by Kyoto prefecture
Machine tool Manufacturing	48		Own factory		Supplier		China		
Precise plastic mould	42	Electrical equipment	Own factory	Exchange association among SMEs	Supplier				

companies cannot imitate easily. Although a metal process SME has higher margin rates than other companies, because it can only process difficult-to-cut materials in the short term, it can get orders regularly. Originality and unique technology and skill are more important than production costs for SMEs in urban areas.

Second, three of the 20 SMEs are R&D-oriented business ventures that are concentrating on the design and development of new products. The first SME produces equipment for mechanization. It has obtained patents from Japan, Germany, UK, and US. The managing director pointed out the possibility of a development-oriented venture business. As LEs reduced the number of engineers, they must rely on outsourcing to develop peripheral equipment. The second SME also mentioned the same point. Since a small venture company is looking for niche markets, it has many opportunities to develop various products. Although experience is necessary for the development of new products, engineers cannot get many chances in LEs because they concentrate only on major projects. Meanwhile, the SME concentrates on product design, development, and sales, but is outsourcing manufacturing. The third SME is shifting to engineering company so it is likely that it will stop manufacturing in the future.

Third, four of the 17 SMEs in Ota ward were located in industrial apartments. They have factories in the lower floors and residences in the higher floors. It is noteworthy that two R&D-oriented business ventures are in the industrial apartments. It can be surmised that industrial apartments helped in the entry of new industry-oriented SMEs.

Forth, four of the 20 SMEs were subcontractors. Among them, three SMEs have transaction with other companies while only one depends on a parent company by 100 percent. The company is going to shift to China to follow its parent company. This shows that dependence on a parent company makes the management base of an SME fairly weak.

7. POLICY RECOMMENDATIONS

SME policies in Japan have promoted modernization and diversification of business to keep up with changes in the industrial structure. In the 1960s, the government imposed strict conditions on the modernization scheme of SMEs. In the 1980s, the government paid attention to the initiatives of SMEs for diversification. The analysis of SME policies in the different periods and the experience of SMEs may be summarized as follows:

- SME policies can facilitate private sector initiatives. The government should not force business models like modernization policies. SMEs have the ability to adjust to new economic environment.
- The entry of SMEs should be encouraged by providing privileges such as subsidies, low-interest loans, and tax concessions as these can contribute to employment creation and entry of new industries.
- Local governments should play an active role in stimulating the local economy by promoting the growth and entry of new SMEs through relevant SME policies.
- Unfair trade should be regulated by law. Under recession, many subcontractors have been facing unfair transaction. For example, parent companies demanded subcontractors to reduce prices of components after the agreement.

Moreover, lessons from the Japanese experience suggest three policy recommendations for Asian countries.

- A tax return, which is made with a certain formula of quick bookkeeping, is useful to improve the financial accounting and financing systems of SMEs.
- The construction of industrial apartment is a good way to make industry and residence coexist in a congested area. Many SMEs do not have enough funds to move out of their place.
- The experience of Sumida ward is stimulating. As local governments have more information on SMEs in the locality than the central government, it can make more effective plans for SME promotion, which take into consideration the character of

the local economy and available resources. It is also important for employees of local governments to determine the needs of SMEs in their locality so they know what type of assistance they need.

NOTES

¹ Interest-bearing debt redemption period is calculated by dividing outstanding interest-bearing debt by cash flow. Outstanding interest-bearing consists of short-term debt, long-term debt, and corporate bonds. Cash flow includes ordinary profit and depreciation. In this paper, we consider companies with between 1 million and 100 million capital as SMEs and companies with more than 100 million as LEs based on the previous Small and Medium Enterprise Basic Law that defined companies with less than 101 million capital or employing less than 301 employees as SMEs.

² Existing establishment represented an establishment that had been surviving at the same location since the date of the 2001 Census. Newly organized establishment represented an establishment that had been newly organized or had moved into the present location since the date of the Census. Abolished establishment represented an establishment that had moved to a different location or had been closed after the date of the Census.

³ The entry rate indicates “(1) the average number of establishments newly established” during a particular period as a proportion of “(2) the number of establishments already in existence at the start of the period,” and is calculated by dividing (1) by (2). The exit rate is calculated in a similar manner.

⁴ The Small and Medium Enterprise Basic Law was amended in 1999. The amendment raised the capital size of SMEs from JPY100 million to JPY300 million.

⁵ Although they are called SME universities, they are training institutes.

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