

研究ノート

ANALYSIS OF SME IN THE HIGASHI-OSAKA AREA

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東大阪地域における中小企業集積の分析

大西正曹

Abstract

This paper reproduces the content of past articles that report on SMEs in the Higashi-Osaka area. In a later issue, we will attempt a comparative analysis of SMEs in the Higashi-Osaka area. SMEs are tossed about by sudden changes in the domestic and international economic environments. We will analyze their role by comparing the conditions prevalent 13 years ago to those today, in order to identify how SMEs have been managed under those conditions.

Keywords: SMEs, accumulation of SMEs, Higashi-Osaka area, economic circumstance

抄 録

ここでは、東大阪地域の中小企業に関する過去の論文を再録する。その上で別の機会に東大阪地域の中小企業の比較分析を試みる。

中小企業は内外の経済環境の激変に翻弄されている。そのなかで、中小企業がいかに経営をおこなってきたのか、13年前と今日を比較することで東大阪地域の中小企業の役割を分析する。

キーワード：中小企業、中小企業集積、東大阪地域、経済環境

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1. Overview of SMEs in the Higashi-Osaka Area

1-1 Introduction to Higashi-Osaka

(1) General Information

Higashi-Osaka City is in the east of Osaka City. It has an area of 61.8 km² and a population of 510,226 (as of October 1, 1995). On the basis of its population, Higashi-Osaka City is the third largest of the 44 municipalities and rural communities in Osaka Prefecture, after Osaka City and Sakai City.

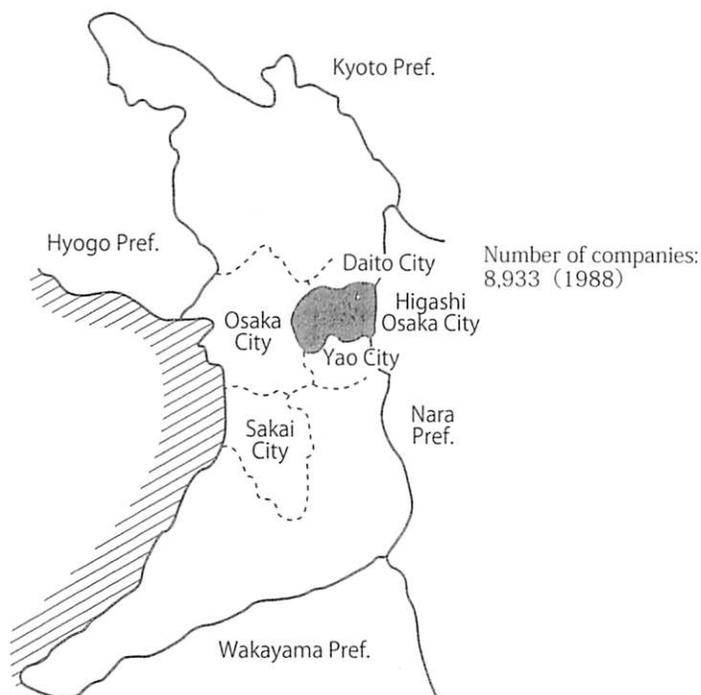
(2) History

Higashi-Osaka City was formed in February 1967, upon the merger of the three cities of Fuse, Kawauchi, and Hiraoka.

(3) Industrial Structure

According to the 1994 Business Registry Survey of Japan's Management and Coordination Agency, there were 35,061 businesses in Higashi-Osaka City in that year, which employed 253,029 persons. This ranks Higashi-Osaka City immediately behind Osaka City as having the second highest number of businesses. Osaka, Osaka Prefecture, and Sakai contain the first, second, and third highest numbers of employed persons, respectively.

Looking at figures by industrial sector, we find that the commercial industry—which comprises wholesalers, retailers, and restaurants—accounts for 40.5% of all



Source: Higashi-Osaka City Economic Report

Fig 1 Map of Higashi-Osaka City

businesses in the area; this is followed by the manufacturing industry, at 30.0%. In terms of the number of persons employed, the manufacturing industry is the highest, at 38.0%.

1-2 Overview of Industrial Structure

(1) Industry Density, by City

According to 1993 industry statistics, there were 9,348 businesses in the manufacturing industry in Higashi-Osaka City, employing 86,139 persons. Product shipping volume and the like represented a total value of 1.6759 trillion yen. These figures are respectively 13.5%, 9.8%, and 7.8% for all of Osaka Prefecture.

Amongst the municipalities in Osaka Prefecture, Higashi-Osaka City has the second-highest number of businesses and persons employed, making it second only to Osaka only. Meanwhile, Higashi-Osaka City has the third-highest shipping volume, behind

Osaka City and Sakai City. In terms of the number of factories per square kilometer of residential area, Higashi-Osaka City is by far the highest—not only in Osaka Prefecture, but also in all of Japan, including the Greater Tokyo Area.

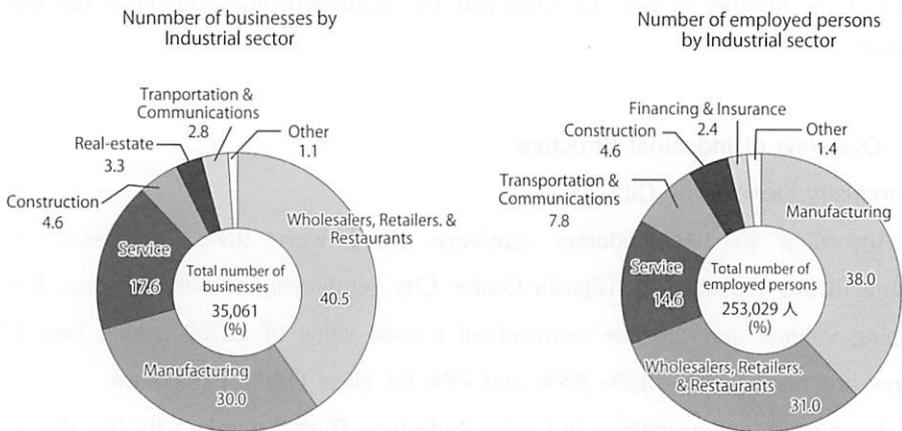
(2) Number of Enterprises, by Size and Industry Sector

① Number of Enterprises, by Size

Higashi-Osaka City has several large enterprises and an overwhelmingly high proportion of small to medium-size enterprises. In examining businesses in terms of workforce size, we find that 99.9% of businesses in the manufacturing industry in Higashi-Osaka City (accounting for a total of 9,348 employees) each has 300 or fewer employees. Furthermore, 44.7% of those enterprises each has between one and three employees, while another 35.7% each has between four and nine employees.

Businesses employing between one and nine persons account for 80.5% of all area businesses in the manufacturing industry, while accounting for no more than 32.7% of the total number of persons employed in the industry and 17.3% of total industry shipping volume.

Higashi-Osaka City is below Osaka Prefecture averages, in terms of number of



Source: 1994 Business Registry Survey, Management and Coordination Agency

Fig 2 Industry Structure in Higashi-Osaka City

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Table 1 Comparison of Industries across Municipalities in Osaka Prefecture (1993)

	Number of businesses		Number of employed persons (Persons)		Shipping volume (10,000 yen)	
1st	Osaka	30,601	Osaka	317,252	Osaka	726,255,478
2nd	Higashi-Osaka	9,348	Higashi-Osaka	86,139	Sakai	243,686,891
3rd	Yao	4,108	Sakai	65,823	Higashi-Osaka	75,678,664
4th	Sakai	3,740	Yao	48,035	Yao	123,941,934
5th	Moriguchi	2,179	Kadoma	26,818	Ibaragi	83,973,923

Source: Industrial Statistics, Ministry of International Trade and Industry

Table 2 Number of Factories per Square Kilometer of Residential Area, by City

Industrial density ranking	City	1992	1994	Residential area (D) km ²	A/D (Number of businesses per lkm ² residential area)	B/D (Number of factories per lkm ² residential area)
		Number of businesses (A)	Total number of factories (B)			
1	Higashi-Osaka	35,689	9,348	51.72	690.04	180.74
2	Moriguchi	10,720	2,179	12.71	843.43	171.44
3	Osaka	272,893	30,601	220.44	1,237.95	138.82
4	Yao	15,554	4,108	36.88	421.75	111.39
5	Greater Tokyo	642,281	63,328	612.36	1,048.86	103.42
6	Taguchi	23,472	5,641	54.56	430.21	103.39
7	Kadoma	8,682	1,158	12.29	706.43	94.22
8	Izumiotstu	4,784	930	11.65	410.29	79.76
9	Daito	5,753	1,091	15.36	374.54	71.03
10	Kyoto	102,385	12,078	201.75	507.48	59.87
11	Amagasaki	26858	2,790	49.69	540.51	56.15
12	Toyonaka	16,831	1,771	36.58	460.11	48.41
13	Kawasaki	47,119	4,673	130.99	359.71	35.67
14	Nagoya	156,367	10,161	311.96	501.24	32.25
15	Izumisano	5,137	1,006	31.27	164.28	32.17

Source: Higashi-Osaka City Economic Report, March 1995 issue

employees and shipping volume per business.

② Number of Enterprises, by Industrial Sector

Looking at the number of businesses in the manufacturing industry by current product category, we find the metal products sector to involve 2,399 businesses, or

Table 3 Number of Businesses, by Number of Employees (1993)

Employee base	Number of businesses	Number of persons employed (Persons)	Shipping volume (10,000 yen)
1-3	4,180 (44.7)	8,579 (10.0)	6,173,301 (3.5)
4-9	3,343 (35.8)	19,582 (22.7)	24,306,572 (13.8)
10-19	935 (10.0)	12,793 (14.9)	24,957,273 (14.2)
20-49	482 (5.2)	18,913 (22.0)	41,001,402 (23.3)
50-99	338 (3.6)	10,223 (11.9)	31,403,457 (17.9)
100-299	58 (0.6)	9,049 (10.5)	26,963,916 (15.3)
300 or more	12 (0.1)	7,000 (8.1)	20,872,743 (10.2)
Total	9,348(100.0)	86,139(100.0)	175,678,664(100.0)

Source: Industrial Statistics, Ministry of International Trade and Industry
 Note: Percentages given in.

Table 4 Number of Employees and Shipping Volume, by Business

		Osaka Pref.	Higashi-Osaka City
Number of businesses		69,474	9,348
Number of persons employed (Persons)	Total	873,414	86,139
	Per business	12.6	9.2
Shipping volume (10,000 yen)	Total	2,253, 896,294	175,678,664
	Per business	32,442	18,793

Source: Industrial Statistics, Ministry of International Trade and Industry

25.7% of the whole industry; following is the general machinery and tools sector, with 2,076 businesses (22.2%). Other machinery-related sectors deal in electric machinery (578 businesses, 6.2%), transportation equipment (244 businesses, 2.6%), and precision equipment (87 businesses, 0.9%).

Based on the aforementioned figures, it is clear that the metal products sector and general machinery and tools sector comprise the core industry sectors of Higashi-Osaka City. These sectors originally developed as part of the local foundry industry.

Additionally, there are industry sectors that produce foodstuffs (116 businesses, 1.2%), textiles (111 businesses, 1.2%), and apparel (304 businesses, 3.3%), as well as others that manufacture plastic products or are involved in various daily essentials such as publications, printing, paper, rubber, leather, and others. Moreover, there are enterprises that supply metals, textiles, glass, chemicals,

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Table 5 Number of Businesses, by Industry Sector (1995)

Employee base	Number of businesses				Number of persons employed				Shipping volume			
	1993	1996			1993	1996			1993	1996		
		Total	Percent- tage (%)	Increase over prev. survey (%)		Total	Percent- tage (%)	Increase over prev. survey (%)		Total	Percent- tage (%)	Increase over prev. survey (%)
Total	9810	9348	100.0	△ 4.7	92885	86139	100.0	△ 7.3	206151.778	175678.664	100.0	△ 14.8
12 Foodstuffs	106	116	1.2	9.4	2285	2535	2.9	10.9	4256.993	5250.204	3.0	23.3
13 Beverages, feed & tobacco	6	7	0.1	16.7	70	57	0.1	△ 18.6	355.933	286.161	0.2	△ 19.6
14 Textiles	122	111	1.2	△ 0.9	1467	1169	1.4	△ 20.3	3750.205	2872.671	1.6	△ 23.4
15 Apparel	341	304	3.3	△ 10.9	2307	2090	2.4	△ 9.4	3015.966	2821.373	1.6	△ 6.5
16 Lumber	116	101	1.1	△ 12.9	574	461	0.5	△ 15.7	703.735	483.743	0.3	△ 31.3
17 Furniture	260	251	2.7	△ 3.5	2701	2476	2.9	△ 8.3	6944.630	5251.831	3.0	△ 24.4
18 Pulp & Paper	346	336	3.6	△ 2.9	4108	3718	4.3	△ 9.5	8019.980	7900.024	4.5	△ 1.5
19 Publishing & Printing	507	503	5.4	△ 0.8	4684	5345	6.2	14.1	8990.254	9891.415	5.6	10.0
20 Chemicals	98	107	1.1	9.2	1629	1594	1.9	△ 2.1	5013.240	4830.925	2.6	△ 7.6
21 Petroleum & Coal	4	4	0.0	0.0	26	18	0.2	△ 30.8	31.678	19.605	0.0	△ 38.1
22 Plastics	867	836	8.9	△ 3.6	8953	8144	9.5	△ 9.0	19186.354	15508.275	8.8	△ 19.2
23 Rubber	132	124	1.3	△ 6.1	981	867	1.0	△ 11.6	1625.015	1488.817	0.8	△ 8.4
24 Leather	175	178	1.9	1.7	1103	1051	1.2	△ 4.7	1933.022	1857.528	1.1	△ 3.9
25 Ceramics, Soil & Rock	86	83	0.9	△ 3.5	1255	1046	1.2	△ 16.7	2722.456	2006.960	1.1	△ 26.3
26 Iron	296	291	3.1	△ 1.7	3414	3318	3.9	△ 2.8	19269.059	11999.848	6.5	△ 40.8
27 Nonferrous metals	176	175	1.9	△ 0.6	2339	2621	3.0	12.1	7988.559	7723.826	4.4	△ 3.3
28 Metal products	2626	2399	25.7	△ 8.6	19431	17682	20.5	△ 9.0	36215.054	29662.207	16.9	△ 18.1
29 General machinery	2188	2076	22.2	△ 5.1	17931	15698	18.2	△ 12.5	39614.041	33334.798	19.0	△ 15.9
30 Electric machinery	611	578	6.2	△ 5.4	8149	6814	7.9	△ 16.4	16314.431	12250.944	7.0	24.9
31 Transportation equipment	227	244	2.6	7.5	4519	4337	5.0	△ 4.0	11589.940	11725.915	5.7	16.1
32 Precision equipment	78	87	0.9	11.5	1200	1299	1.5	8.3	2210.757	2565.796	1.5	16.1
33 Weapons	—	—	—	—	—	—	—	—	—	—	—	—
34 Other	442	437	4.7	△ 1.1	3786	3799	4.4	0.3	6400.476	6745.798	3.8	5.4

Source: Industrial Statistics, Ministry of International Trade and Industry

plastics, rubber, and other materials. This diversification of industry composition is one of the hallmark characteristics of Higashi-Osaka City.

1-3 Transition in Industrial Structure

(1) A History of Industries in Higashi-Osaka City

As previously mentioned, numerous small to medium-size enterprises operating in a diversity of industry sectors are established in Higashi-Osaka City. One reason for the heavy concentration of small and medium-size enterprises in the area today is that many such enterprises moved to the area from Osaka and other peripheral areas during Japan's years of strong economic growth, from the mid-1960s through the 1970s. Another reason is that many new businesses started up directly within the city.

In any case, the area has traditionally been a manufacturing center, and this has been the case for some time.

① 1600-1911 (Origins of the Local General Merchandise Industry and Metal Industry)

Osaka has always been a center of consumption, and it has therefore been at a geographical advantage, with Osaka just next door. The area east of Osaka, now known as Higashi-Osaka, was home to thriving industries that produced cotton, medicines, powder, vegetable oil, wire, and other goods. Over the years, many of these industries fell into decline. Perhaps the most dramatic case was that of the cotton industry, which rapidly dwindled away as cotton imports grew and modern spinning mills came into vogue in the second half of the 1800s.

Many of the people employed in these declining industries sought work in Osaka. They went to work producing towels, brushes, buttons, and other household goods. As they learned these trades, they returned to Higashi-Osaka to start up new businesses. Other industries "spun off" from industries already in the Higashi-Osaka area; one such example is the chicken-wire industry, which developed out of the wire factories already in the city.

② 1912-1930s (Increased Industry Activity, on a Wave of Infrastructure)

Improvements)

Electric power came to the Higashi-Osaka area when the Osaka Denki Kido railway (now the Kintetsu Nara Line) opened in 1914. Further, during that time, industrial zones were built such as the one in Taikaida, of the Fusei District near Osaka. This encouraged many factories to move from Osaka to Higashi-Osaka. In 1931 and 1936, the Joto Kamotsu-sen Road and the prefectural Imazato-Hiraoka-sen Road were opened, respectively, as industrial roads. This meant that Osaka and Higashi-Osaka were linked not only by railway, but also by highway. As a result, even more enterprises poured into the area from Osaka.

In 1935, Fusei City (which merged in 1935 with Kawauchi City and Hiraoka City to form Higashi-Osaka) had 340 factories and provided 4,870 jobs. This was the second-largest concentration of industry in Osaka Prefecture after Sakai City, which was home to 771 factories.

The leading industries of the time produced celluloid, castings, twisted thread, machinery and tools, and daily essentials.

③ 1935-1950 (Increased Activity in the Machinery and Metal Industries)

In the late 1930s, Osaka City was a production center for textile-related machinery. In fact, many of Japan's domestically produced sewing machines were made in Osaka. During World War II, industries were forced to convert to machinery and metal production, to support the war effort. As production rose, many set up factories in Higashi-Osaka.

After the war, the major industrial zones in Osaka lay in ruins, but the industries of Higashi-Osaka escaped destruction and were able to rebuild themselves within a comparatively short timeframe. Thereafter, the local industries boomed on account of the construction needs, including wire, barbed wire, nails, chicken wire, tools, and other products that fed demands resulting from both the Korean War and domestic reconstruction.

In the late 1950s, the home appliance industry grew in leaps and bounds. Major manufacturers like Matsushita Electric, Hayakawa Denki (Sharp), and Sanyo Electric had factories near the Higashi-Osaka area. In the blink of an eye, small

and medium-size businesses within the machinery and metal industries — which once made sewing machine parts — came to focus on the manufacture of parts. The number of orders increased, and the number of businesses in the Higashi-Osaka area doubled by 1965. The rise in industry in Higashi-Osaka was sharp in comparison to the increase in Osaka, where industry grew by some 35% in the same period.

④ 1965-1975 (Birth of a City of Small and Medium-Size Enterprises)

Between 1965 and 1975, Higashi-Osaka City became the city it is today, characterized by a high concentration of small factories.

Within these 10 years, the number of factories in Higashi-Osaka, by now a municipality, had almost doubled. Many of the new factories employed three or fewer persons, and most had been established by hard-working laborers who broke off from other small and medium-size enterprises in Osaka and Higashi-Osaka.

There were two main reasons behind the explosive increase in the number of new businesses in Higashi-Osaka. First, Japan had entered in 1960 a long period of high economic growth, and factories that once could rely solely on in-house production fell behind as rapid increases in production demand forced them to seek outside support. Second, there was the emergence of for-lease row-house-type factories. At their peak, around 500 such factories had been built on converted farmland; as a result, small enterprises took up the majority of production.

⑤ 1970-1984 (Drastic Changes in the Economic Environment; Little, If Any, Increase in the Number of Enterprises)

Because of the effects wrought by the weaker U.S. dollar and the oil crisis in the 1970s, many businesses in Higashi-Osaka converted to other lines of business, closed down, or went bankrupt altogether. It was predicted that the number of operating businesses would decline drastically, but extremely careful downsizing and “break-ups” (i.e., featuring employees who broke off to start their own

business) kept the number of businesses almost constant, right until the mid-1980s. The number of small and medium-size enterprises in the area peaked in 1983, but the number has been declining ever since.

⑥ **1985-(Drastic Changes in the Economic Environment, and a Decrease in the Number of Enterprises)**

After 1985, the number of businesses in the area repeatedly fluctuated to some degree. However, small local businesses were hit hard in the late 1980s by the rapid appreciation of the yen that followed the 1985 Plaza Accord, the shift to overseas production that spanned Japan's domestic industry, and the collapse of the asset-inflated "bubble" economy. Working dexterously, many enterprises were able to overcome such harsh economic conditions, but there was an approximate drop of 900 businesses between 1990 and 1995. It remains undetermined, whether that decline was caused by the so-called "hollowing out" effect that has plagued domestic industry, or by the transformation process that Japan's manufacturing industry underwent as it was being restructured.

(2) **Changes in the Number of Enterprises**

It has already been stated that the Higashi-Osaka area had started to become a city of small and medium-size enterprises in 1965. By examining industry statistics from 1960 onward, we can identify the following four phases demarcating transitions in the number of businesses.

① **Phase I: Period of Increase (-1975)**

〈Overview〉

Up until 1975, the number of small and medium-size enterprises rose on the tail wind of a growing home appliance industry, as well as the overall high economic growth Japan was enjoying.

According to industry statistics, there were 4,304 enterprises in 1966, 6,109 enterprises in 1970, and 9,479 in 1975; this represents a sharp rise in Higashi-Osaka City. At the same time, traffic infrastructure was being built for the Osaka World

Expo. Taking advantage of the opportunity, farmers converted their land into industrial land and built many row-house-type factories — each of which consisted of anywhere from five to eight individual factory ambients — alongside highways, and they offered them for lease. This was the invitation that aspiring entrepreneurs looking to start a business were looking for, and there was a resulting sharp increase in the number of new small enterprises.

There was also an influx of small enterprises into Higashi-Osaka from Osaka. Rising land prices, problems stemming from mixed industrial-residential areas, and tighter regulations on pollution were all issues that pushed small inner-city factories to relocate. (An important note worth mentioning is that many small business owners in Japan are superstitious about compass direction when starting up a business. Though the Kadoma, Neyagawa, and Hirakata areas were potential industry sites, they were considered taboo because they are located northeast of Osaka — an “unlucky” direction. Thus, many chose Higashi-Osaka, because it is east of Osaka and therefore “safe.” Furthermore, many of the shrines on Mt. Ikoma, east of Osaka, enshrine business deities [e.g., the Ishikiri Shrine enshrines the god of medicine]. Believers saw this as a suitable area for business.)

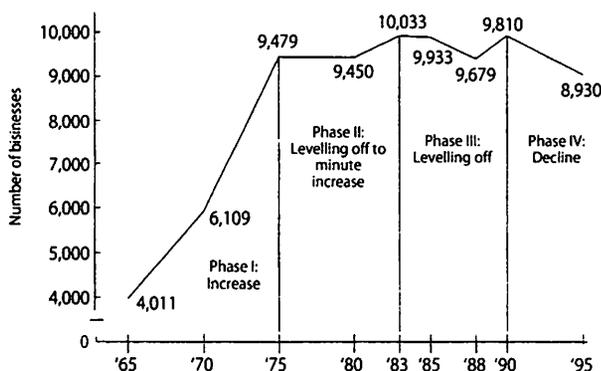
〈Increase in the Number of Small Enterprises〉

The number of small and medium-size businesses peaked in 1983. By that year, the number of enterprises employing between one and three persons had increased 4.62-fold compared to 1962, while enterprises employing between four and 19 persons had increased 3.6-fold; enterprises employing 20-99 persons, 1.13-fold; enterprises employing 100-299 persons, 0.75-fold; and those employing 300 or more persons, 0.85-fold.

The number of enterprises employing between one and three persons began to rise sharply around 1965, and it peaked between 1970 and 1975.

During this period, because Higashi-Osaka City was so easily accessible, an influx of business poured in from the Hirano and Ikuno Districts of Osaka City. Additionally, many persons broke off from existing enterprises and started up their own businesses, as a result of the rise in demand driven by continued high economic growth. As

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Source: Industrial Statistics, Ministry of International Trade and Industry

Fig 3 Changes in the Number of Businesses

mentioned, enterprises that had previously relied solely upon in-house production could not keep pace with demand, and so surplus demand was contracted out to “spun-off” enterprises.

〈For-Lease Factories: Nurseries for Small Enterprises〉

i) History of Construction

For-lease factories served as “nurseries” for small enterprises. They were built as slate-roofed row-houses with cinder-block or plywood partitions to break up the space into anywhere from five to eight distinct ambients. Each ambient ranged from 40 to 120m² (some had two floors) and had minimal water, gas, and electricity services. There are about 500 such factories in the city today; these factories are said to have emerged around 1960 in one of two ways. One was the landowner route. Landowners like Ogita, a leader in his agricultural cooperative, decided to utilize land more effectively by building factories and leasing them. The other alternative was to utilize vacant land — as was the case with the owner of Saeki Kogyo who when faced with labor disputes, angrily divided up his factory and offered the factory space for rent.

The increase in the number of for-lease factories in Higashi-Osaka City coincided almost perfectly with the aforementioned increase in the number of small

enterprises. In other words, many for-lease factories popped up between 1965 and 1968, when the Chuo Kanjo-sen trunk road was built. Other industrial roads (e.g., the Hiraoka-Chikko-sen Road) were also opened in 1970 as part of the infrastructure for the Osaka World Expo. Overall, these developments greatly expedited access to Higashi-Osaka.

Additionally, farmers in the area started building for-lease factories in order to boost the value of their land. (During this period, for-lease factories offered greater returns per area than did apartments. Moreover, farm land was usually located far from train stations, making it more suitable for factories than apartments and thus driving a construction boom.) Around 1970, there were as many as 500 for-lease factories, providing space for around 2,500 individual ambients.

The number of for-lease factories peaked between 1972 and 1974. Thereafter, new constructions began to decline on account of rising land prices, problems associated with composite industrial-residential areas, and regulations on pollution, among other issues. In more recent years, abandoned sites and renovated land have been used as warehouse space, highlighting the changes in how rental factories are used as time progresses.

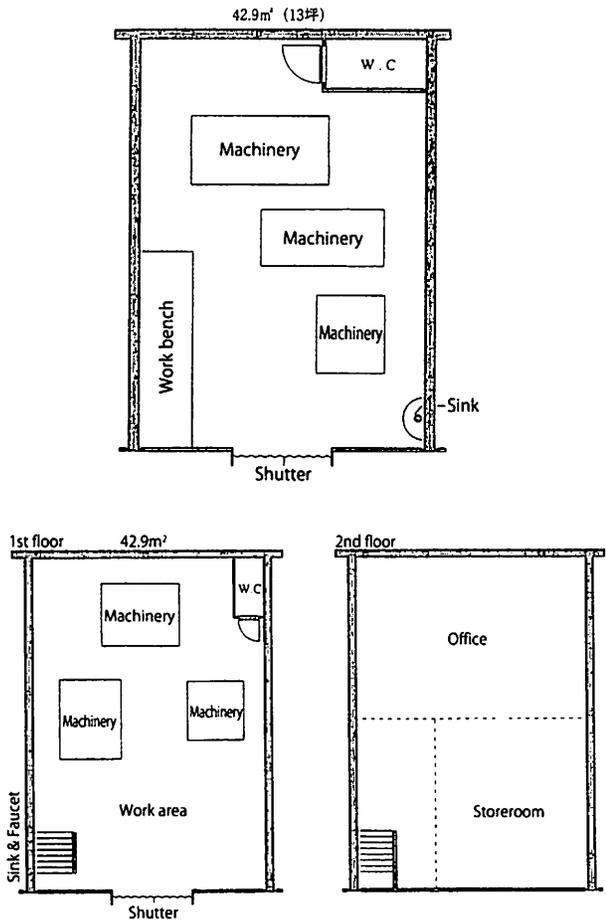
- Enterprise A: Owner 37 years of age, three employees

The owner graduated from a trade school and went to work as a welder for an electric appliance enterprise whose headquarters were in Osaka. He also received training in welding for two years from one of the enterprise's customers. Under the recommendation of the enterprise owner, he set up his own business as a subcontractor of his original employer.

- Enterprise B: Owner 42 years of age, six employees

The owner graduated from high school and went to work as a salesman for a steel firm whose headquarters were in Osaka. When he was 27 years old, he started his own business making bolts and nuts. In the beginning, he rented one factory with about 40m² of floor space; he now has three factories and employs six people. His

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Note: Situation reported in 1987.

Fig 4 Cases of For-Lease Factory Space

former customers and many persons involved in the steel business — whom he met while working as a salesman — all recommended that he start up his own business.

ii) The Role Fulfilled by For-Lease Factories

Since before World War II, many small enterprises producing daily essentials have been concentrated in Higashi-Osaka City. In the early 1960s, when Japan's economy started growing in earnest, the area became a haven of subcontractors

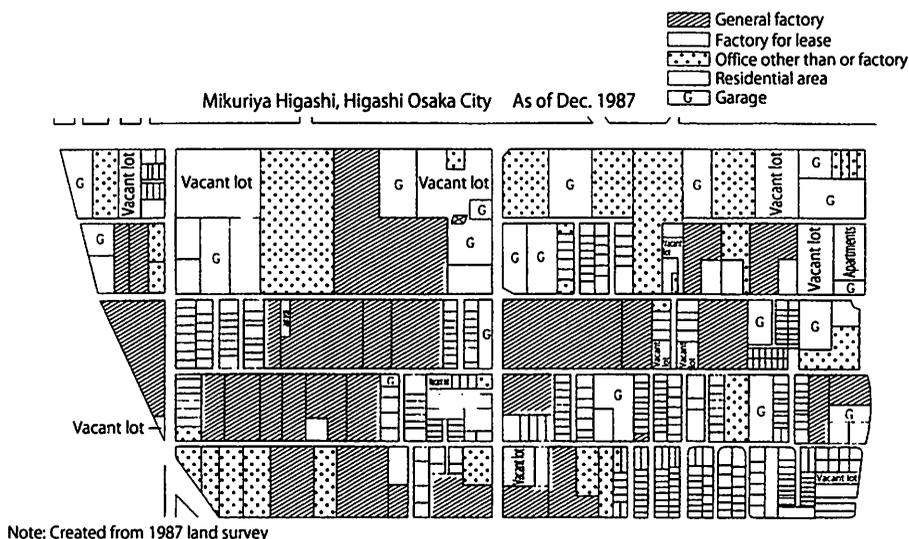


Fig 5 Land Situation of For-Lease Factories

supplying parts for electrical appliances, sewing machines, and other products from growing industries. Within this context, the number of businesses grew 2.5-fold in the 10 years that followed. Many of them leased factory space; for-lease factories provided the increasing number of new businesses a place to start operations as the economy continued to grow.

Moreover, the greater portion of the owners who moved into the for-lease factories had migrated to Osaka *en masse* from Shikoku, Kyushu, and other outlying areas, in search of work. They had been honing their skills at small and medium-size enterprises for about 10 years and, being highly ambitious, decided to become independent. The for-lease factories in Higashi-Osaka City gave them a place to “set up shop.” These factories made it possible for aspiring entrepreneurs to start their business with a relatively small amount of capital.

There are many small metal-machining enterprises in Higashi-Osaka; it was often the case that, when one of them went bankrupt, friends from two or three other enterprises would join together to form a new enterprise that made small parts, screws, nails, molded parts, and the like. Ultimately, leased factory space provided such “spin-off” enterprises with a place to start business.

iii) Enterprises That Grew Out of For-Lease Factory Space

Undeniably, there are still many enterprises that use single-application tooling machines. However, because of new business requirements, there are today many enterprises that have also introduced numerically controlled turning machines. These latter, more progressive enterprises—including Takako Seiki—were started by leasing factory space but later grew into medium-size enterprises.

② Phase II: Leveling Off to Minute Increases (1975–1983)

At the 1975 peak, there were 9,479 factories in Higashi-Osaka City. However, as previously mentioned, the number of new businesses began to decline because of issues such as rising land prices, problems stemming from issues related to the mixing of industrial and residential areas, and tighter pollution-control regulations. The numbers remained at around 9,500 until 1983, when it peaked at 10,033.

③ Phase III: Leveling Off (1984–1990)

After reaching its overall peak in 1983, the number of enterprises repeatedly fluctuated to some degree, but overall it tended to level off. In 1985, there were 9,933 enterprises. This figure dropped to 9,679 by 1988, due to the economic slump that followed appreciation of the yen; however, it climbed back to 9,810 by 1990.

④ Phase IV: Decline (1991–)

The number of small and medium-size enterprises fell during the slump that followed ratification of the 1985 Plaza Accord and the demise of the asset-inflated “bubble” economy. Some 892 businesses in Higashi-Osaka either converted to other lines of business, closed down, or went bankrupt, between 1990 (when there were 9,810 businesses) and 1995 (8,918 businesses). The decline was most evident among small enterprises comprising one to nine employees each (i.e., almost 700 of all lost businesses).

2. Characteristics of SME Concentration in the Higashi-Osaka Area

In the past, questions have arisen as to how Japan’s SMEs has managed to survive

in the face of the many economic crises they encounter. The fact of the matter is that small-scale and small and medium-sized enterprises have not been merely struggling to produce things; they have been skillfully adjusting their manufacturing processes and using outside sales, development, and distribution functions to service narrow niche markets, while at the same time developing links with other enterprises within a specific area. SMEs with high levels of technological skill have also appeared in the midst of fractionated manufacturing processes and functions. Business-linking and the use of high-level processing technology in such a concentrated area of small and medium-size manufacturing industries is obvious not only in Higashi-Osaka but also, to a greater or lesser extent, in other parts of Japan.

The characteristics that make the concentration of SMEs in Higashi-Osaka more effective than those in other areas are as follows.

2-1 “Range,” “Level,” and “Size”

The industry concentration in Higashi-Osaka is characterized by its “range,” or the diverse range of industries existing in the area; the “level,” or the diverse levels of technology, from base to leading-edge technologies; and the “size,” or the diversity of size among enterprises, from small-scale enterprises through to medium-size enterprises, within each industry type.

(1) With regards to the “range,” as already seen in section 1-2, the diversity of industry range can be divided into three main categories: general merchandise, machinery, and metals. Further information on each of these categories is provided below.

① General Merchandise

i) Developed on the Basis of Local Industry

The general merchandise industry in Higashi-Osaka grew out of Osaka City’s large consumer base. The manufacture of general merchandise was first noticed among farmers at the beginning of the Showa Era (mid-1920s) as a supplementary means of income (see Kyozo Takechi, *A Short History of the Pre-war Local Industries of Higashi-Osaka*).

With this as its base, local industries that made use of certain technologies — such as machinery and metal processing — linked with and formed a diverse range of industries seen in present-day Higashi-Osaka, including those that produced textiles, resin, metal, rubber, plastic, leather, wood, pottery, and glass, among others.

ii) Marketing Function Development

As the lifecycles of these general merchandise products are relatively short, enterprises needed to pioneer new markets; in recent years, they have also suffered from increased competition from overseas products. To survive in such product fields, then, it was essential that an enterprise strengthen its marketing and product development functions.

In Higashi-Osaka, many enterprises actively pioneer new markets, and thus make a concerted effort to strengthen such functions. According to "Ichiban Kagami Higashi-Osaka," a publication produced by Higashi-Osaka City and the Higashi-Osaka Chamber of Commerce and Industry that details enterprises that hold the largest market share of their respective sectors, there are such enterprises in Higashi-Osaka, in the following industries: hair brushes, baby clothes, steel cabinets, portable gas burners, paper shopping bags, jeans, ponchos for mountain-climbing, polypropylene film bags, hair combs, desktop diaries and

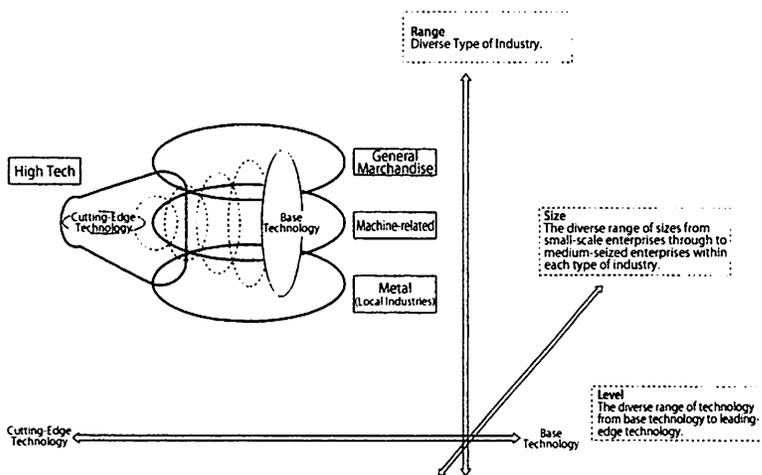


Fig 6 "Range," "Level," and "Size"

Table 6 Local Industries Located in Pre-War Higashi-Osaka area

Handles and sticks for western-style umbrellas	Towels
Wistaria processing	Nets
Bamboo brushes	Hammocks
Geta uppersoles	Silk throwing
Glue	Brush bristle implanting
Buttons (shells, nuts, water buffalo)	Bags and pouches
Amber pipes	Match box glueing
Glass watch faces	Tube processing
Watch hands	Seaweed powdering
Hairdressing machines	Metal Mesh

Source: Kyozo Takechi, A Short History of the Pre-war Local Industries of Higashi-Osaka.

notebooks, metal parts for picture frames, rubber for bags and pouches, paper trays, brushes, resin for hairpins and clips, and other products.

[Example: Iris Ohyama (Head Office: Sendai)]

Iris Ohyama, which began operations in Higashi-Osaka area, was originally a subcontractor in the blow-processing of plastic containers. In 1964, at the age of 19 and following the death of his father, the founder of the enterprise—who is also the present manager of the enterprise—took over operations and attempted to develop new products and markets, in order to break out of the subcontracting system.

However, like everyone else, Iris Ohyama faced the economic crisis that arose as a result of the first oil shock in 1973; in 1974, Iris Ohyama closed its Higashi-Osaka factory and shifted its operations to northeastern Japan.

Building on its experience in Higashi-Osaka area, it broke away from the conventional mass production of a small range of products combined with the wholesale system; instead, it formed a manufacturer-vendor system with short runs of a large range of products, combined with an efficient delivery system that was based on a thorough understanding of consumer needs.

Recently, on account of its price-cutting tactics, it caused an uproar in the industry by linking up with home centers to manufacture and supply home gardening goods.

iii) Buffers in Times of Economic Recession

As there are many basic necessities among the general merchandise products on the market, it is relatively easy to secure a specific market, regardless of the state of the economy. Among general merchandise-related industries is a large number of small-scale home industries in which a high proportion of employees comprise family members. In such circumstances, it is relatively easy to downscale and reduce the number of employees in times of a recession, thus making it easy to avoid bankruptcy and the discontinuation of business. For these reasons, general merchandise industries are strongly resistant to recessions—a fact that has put a stop to the decrease in the number of enterprises in Higashi-Osaka area and has acted as a shock absorber in times of recession for the area as a whole.

② Machinery

i) Sewing Machine Parts Manufacturers Linked, and Developed Together, with Consumer Electronic and Automobile Industries

After World War II, machinery and metal parts manufacturers concentrated themselves in Osaka City's Ikuno Ward and in Higashi-Osaka, in order to supply parts to sewing machine manufacturers located in Osaka City. After that, leading Japanese industries shifted to processing and assembly, including those focused on automobiles and consumer electronics. As a result, Higashi-Osaka came to play an important role as an area of concentrated support industries, especially for those industries that had become hubs of Japan's continued high level of economic growth.

[Example: Nakano Manufacturing]

Nakano Manufacturing (43 employees) was established in 1949 with the aim of processing sewing machine parts.

Based on precision cutting technology gained from its sewing machine parts processing operations, Nakano eventually turned to parts for consumer electronics and other growing areas of business. From 1976, the enterprise started manufacturing automotive parts (torque conversion clutches) and entered into a

period of high economic growth. Presently, it is engaged in the processing and assembly of clutches for ships and agricultural machinery, as well as parts for hydraulic equipment, industrial machinery, and office equipment.

[Example: Mitsuboshi Manufacturing]

Mitsuboshi Manufacturing (95 employees), established in 1947, was initially involved in the processing of parts for industrial sewing machines and bicycles. Later, the enterprise made product development and technological improvements its priorities, and today it is involved in made-to-order production and the development of its own products. It is also involved in the production of jigs and tools for engineering machinery, hydraulic equipment, and parts for both industrial sewing machines and light electrical appliances.

[Example: Marusa Manufacturing]

Marusa Manufacturing (four employees) was established in a for-lease factory by a retired technological development department manager from a major consumer electronics manufacturer, together with his son. Using the latest cutting-edge technology and equipment, they are proudly confident that they can make any part. Although orders for their main product, industrial sewing machine parts, have decreased, their prototype underwater camera housing, made possible through previously accumulated technological abilities, has become a success.

ii) Manufacture of Diverse Types of Machinery for Public Welfare and Production Purposes

Presently, many enterprises that manufacture a diverse range of machinery and equipment for public welfare and production purposes are located in Higashi-Osaka area. These include industries that produce such top-share products as metal-processing machines, automated machines, industrial machines, precision equipment, pressure-resistant machines, glass-cutting machines, specialized engineering machines, engineering machines, engineering equipment, boring lathes, automated welding machines, labor-saving machines, hydraulic machines,

automated equipment, sewing machine parts, cardboard boxes, printing machine tools, feeding machines, wire-stretching machines, can-making machines, automated vinyl-making machines, printing/book-binding machines, numerically controlled cutting machines, robots, pumps, screw-sorting machines, automated glass-cutting machines, shaft-related devices for ships, paper tray manufacturing machines, plastic-crushing machines, metal parts, automated wood surface grinding machines, pachinko ball manufacturing machines, and game machines, among others.

iii) Availability of Diverse Machine Parts and Appliances, Jigs, and Tools

In Higashi-Osaka area, where diverse machine-related establishments are concentrated, the processing of a diversity of metal materials is carried out. Machine part, appliance, jig, and tool manufacturers and wholesalers previously located in Osaka City have shifted to hardware estates established in Higashi-Osaka City. Subcontracting enterprises already located in Higashi-Osaka area began supplying products to these wholesalers and developing their own products, and in some cases have even developed into top-share enterprises.

[Example: Trusco Nakayama]

Trusco Nakayama is a wholesaler that has transferred from Osaka City to Higashi-Osaka City and is developing into a vendor-manufacturer that supplies 170,000 items, including jigs, tools, parts, and hardware. The enterprise, which entered the industry in 1964, grew quickly due to its selling point of providing small-lot deliveries. (Orders received by 17:00—including those as small as one pair of pliers—are delivered the following day.) Presently, Trusco Nakayama is manufacturing its own brand, at both its own facilities and at contracted facilities.

[Example: Daishowa Precision Machinery]

The manager of Daishowa Precision Machinery (450 employees) previously managed a sewing machine part manufacturing enterprise, together with his uncle; in 1967, he started a precision machine maintenance tool enterprise based on

technology gleaned from the previous enterprise. From the very beginning, the enterprise actively utilized high-technology enterprises in Higashi-Osaka area, to develop themselves mutually and produce special orders. Today, Daishowa Machinery is known throughout the world as a tooling manufacturer of engineering machines, under the "Big" trademark.

[Example: Lobtex]

With increasing competition from overseas imports and decreased demand in terms of automobile, consumer electronics, and machine components, Lobtex (President: Hajime Jibiki), which initially started out as a manufacturer of hair clippers, moved into new fields of business, from manufacturing working tools such as monkey wrenches, through to electric installation tools and labor-saving tools, among others. The enterprise started making tools in the early Showa Era (mid-1920s) and has since become a top manufacturer of monkey wrenches.

③ Metals (Local Industries)

i) Details of Development

Metal-related manufacturing industries in Higashi-Osaka area have their roots in Kawachi Casting, which flourished during the Edo Period. Later developments among metal-related industries included a shift of enterprises from Osaka City, subcontracting for the Osaka Ordinance Factory, increased demand for construction-related hardware after World War II and during the Korean War, and the linking of such industries with the machine-manufacturing industry. This type of industry accounts for the largest number of enterprises in Higashi-Osaka area.

[Example: Nippo Metal]

Nippo Metal (25 employees) was established in Higashi-Osaka area in 1941 as a press factory and boasted a high level of technology, as evidenced by its designation as a factory cooperating with the Osaka Ordinance Factory. Presently, in addition to manufacturing construction hardware, the enterprise manufactures

fully automated curtain-hook assembly machines and fully automated *nejipori* wrapping machines, among others; it also designs and manufactures various kinds of labor-saving machines.

ii) Diverse Varieties of Metals

The concentration of industries in Higashi-Osaka area is able to handle the wide range of metals that are mainly used in wire-stretching, screws, wire mesh, working tools, and the like. There are enterprises that produce a variety of top products: hardened and stainless steel blades, hammers, brackets for guttering, art screws, metal tubing, stainless steel valve balls, copper pipes, fluorine resin coated nuts and bolts, coaxial cable and cord cable, wire hangers for railway use, wires of different diameters for the pressure-resistant layer of undersea cables, picture frame hardware, color wire, high-grade pliers, and precision nuts, among others.

[Example: Okudasokabe]

Okudasokabe (President: Yasuyuki Okuda) designs and manufactures flexible joints, including those for water pipes for use on the bridge across the straits of Akashi, which must be able to withstand movement of up to 1.5 m in all directions. It was noted that joints produced by the enterprise did not burst during the Hanshin Earthquake, even as those of many other enterprises did.

[Example: Namitei]

Initially appearing as a nail manufacturer soon after World War II, today Namitei (President: Masatsugu Murao) is known as a manufacturer of wire of different diameters for the protection of fiber-optic cables. A pressure-resistant layer developed by Namitei is used in the fiber-optic Pacific Undersea Cable that links Japan and the United States.

(2) "Levels the Field" the Existence of Different Levels of Technology

① Base Technology Enterprises

As shown in Figure 7, many base technology enterprises are located in Higashi-

Osaka area, such as forging and casting, cutting, screw processing, grinding, pressing, can and sheet metal manufacturing, surface treatment, heat treatment, welding and cutting, grinding, and straight-wire processing. With regards to such base technologies, there is evidence of expansion in these industries — not merely in metal processing, but also in the processing of plastic, wooden, and paper products, as well as in printing and book-binding and sewing manufacturing, among others.

② Growth among High-Tech Enterprises

Some enterprises have improved their processing technology to such a degree that other enterprises are unable to compete with them; other enterprises, meanwhile, are utilizing leading-edge technology in fields such as electronics, lasers, and optics. Among such industries, a new type of enterprise is appearing that possesses only the core technology and an idea, and it contracts out other functions to enterprises in the vicinity.

Among such high-tech enterprises, there are those that have been established by technicians who have left the employ of large enterprises; there are also those enterprises where the development section has separated from the parent enterprises and become independently established. Many high-tech enterprises have actively recruited personnel from other enterprises, as well as university graduates.

On the other hand, there are enterprises that have partnered with foreign enterprises to carry out technological developments jointly; there is the possibility that a concentration of industries in a certain area could serve as a "seed bed" for them.

[Example: Itec Tsuritani]

Itec Tsuritani (250 employees) was established in 1924; it originally made leads for vacuum tubes, for military use. Utilizing its own processing technology, the enterprise then expanded into the field of electronics. It is presently a top manufacturer of leads for electronics components.

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Table 7 Number of Establishments, by Processing Technology (from "Mokarimesse Higashi-Osaka")

Process Type and Number of Establishments			
Founding, forging	28	Straight wire processing	6
Cutting	131	Assembly and wiring	19
Screw processing	3	Plastic molding	40
Grinding	15	Other plastic processing	8
Pressing	39	Wooden product processing	9
Can manufacturing, sheet metal	40	paper processing	10
Surface processing	42	Printing and book binding	58
Heat treatment	7	Sewing	35
Nelding and cutting	13	Other processing	33
Polishing	4		

Note: Mokarimesse Higashi-Osaka contains an outline of 1,136 establishments from among all establishments located in Higashi-Osaka area, including their respective technologies by production and by process. These charts are taken from a section of 540 establishments listed in the processing section.

Published: March 1996, Higashi-Osaka City, Economics Departments, Economic Planning Section.

[Example: Nissho Equipment]

Nissho Equipment was formed by an engineer who had been in charge of development at a labor-saving equipment manufacturer that eventually went bankrupt; the engineer subsequently bought its laser-technology patent. The founder chose Higashi-Osaka area as the location for his enterprises because it was possible to utilize the enterprises concentrated in the area to make the actual products, while the enterprises did the brainwork.

[Example: Takako Industries]

After dropping out of his university's department of science and engineering to spend time as a metal products researcher, the manager of this major piston-ring manufacturer went to the United States to study at the Massachusetts Institute of Technology. Thereafter, he returned to Japan to work at a major piston-ring manufacturer before founding his own enterprises in 1970.

The location he chose was a for-lease factory in Higashi-Osaka area. He chose Higashi-Osaka area as his enterprise's location because he felt that as long as one possessed core technology and an idea, it was possible to utilize the functions of the enterprises in the vicinity and start a enterprise with relatively little capital.

(3) Various Sizes of Enterprise Exist within Each Type of Industry, and at All Technological Levels

There are many sizes of enterprise in Higashi-Osaka area, amongst the many kinds of enterprises and at each level of technology therein. No one type of industry is dominated by a small number of large- or medium-size enterprises; rather, a certain number of enterprises exist in each type of industry. This is one of the hallmark characteristics of industry in the Higashi-Osaka area.

Figure 8 provides a detailed industry classification breakdown of the top 40 manufacturing industries, by shipping value (Higashi-Osaka City Economic Department Office Outline, March 1995; Higashi-Osaka City Economic Department). Enterprises in the fields of general merchandise, metal products and parts, and machine tools are all found among the top-ranking types of industry shown in table 8.

For example, in the field of general merchandise, the plastic general merchandise and tableware manufacturing industry was ranked 12th and comprised 90 enterprises. Knit products, ranked at 24th, comprised 17, while the 25th-ranked square-bottomed paper bag manufacturing industry had five.

In the field of metal products and parts, the wire-stretching industry ranked second and comprised 74 enterprises; the third-place bolt, nut, rivet, small screw, and wooden screw manufacturing industry comprised 197 enterprises; the seventh-place electric wire and cable manufacturing industry had 22 enterprises; and the mold and mold-part manufacturing industry, in ninth place, comprised 217 enterprises.

Finally, in the field of machines and tools, the fourth-placed automobile part and accessory manufacturing industry comprised 75 enterprises; the fifth-placed electrical lighting appliance manufacturing industry had 93 enterprises; the freezer, temperature/humidity regulation device manufacturing industry, in eighth place, had 24 enterprises; and the 11th-place office machine and equipment manufacturing industry comprised 257 enterprises.

2-2 The Merits of "Range," "Level," and "Size"

(1) "Manufacturing Department Store"

On account of the diverse "range" of industries in the area, the diversity in the

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Table 8 Detailed Industry Classifications of the Top 40 Manufacturing Industries

(unit: ¥10,000, persons) (1993)

Ranking	Industrial Classification	Value of shipped products	Number of establishments	Number of employees
1	Printing industry (not including the mimeographing industry)	7,860,413	204	3,654
2	Wire stretching industry	6,950,635	74	1,511
3	Bolt, nut, rivet, small screw, and wooden screw manufacturing industries	6,139,624	197	2,672
4	Automobile part and accessory manufacturing industries	4,599,194	75	1,670
5	Electrical lighting equipment manufacturing industry	4,453,666	93	1,769
6	Industries manufacturing metal parts for construction (with the exception of hardware for construction use)	4,143,166	147	1,840
7	Power line and cable manufacturing industries	3,867,732	22	1,262
8	Freezer and heat and humidity control device manufacturing industries	3,577,376	24	1,169
9	Molds, mold parts, and associated accessory manufacturing industries	3,350,845	217	2,269
10	Metal furniture manufacturing industry	3,041,201	39	1,114
11	Office equipment manufacturing industry	2,847,991	14	257
12	Plastic general merchandise and tableware manufacturing industries	2,515,61	90	1,198
13	Valve and associated product manufacturing industries	2,462,567	19	479
14	Other hardware manufacturing industries	2,433,224	106	1,195
15	Plastic mold material manufacturing industries	2,272,087	34	595
16	Industries manufacturing parts and accessories for metal machining and metal processing equipment (with the exception of machine tools and molds)	2,192,028	110	1,438
17	Steel shear slit manufacturing industries	1,967,423	49	552
18	Stamped and pressed metal products (except aluminum and aluminum alloys)	1,905,209	92	1,095
19	Chemical manufacturing industries	1,901,221	23	520
20	Plastic container manufacturing industries	1,897,775	79	1,123
21	Public electrical machinery and appliance manufacturing industries	1,830,478	51	1,062
22	Metal wire manufacturing industries not able to be classified in other industries	1,813,241	71	770
23	Industries manufacturing other machines and equipment for office, service, and public welfare use	1,672,081	16	232
24	Knit product manufacturing industries (with the exception of socks, gloves, working clothes)	1,662,870	17	380
25	Square-bottomed paper bag manufacturing industries	1,598,798	5	507
26	Gas and kerosene equipment manufacturing industries	1,544,387	19	901
27	Non-iron metal die cast manufacturing industries	1,541,663	28	602
28	Plastic film manufacturing industries	1,404,002	12	331
29	Cardboard box manufacturing industries	1,382,094	52	671

Ranking	Industrial Classification	Value of shipped products	Number of establishments	Number of employees
30	Other unclassifiable plastic manufacturing industries	1,353,493	58	794
31	Printing, bookbinding, and paper-making equipment manufacturing industries	1,325,861	40	716
32	Foodstuff industries not able to be classified in other industries	1,310,567	21	569
33	Women's and children's clothing manufacturing industries	1,292,387	56	724
34	Industries manufacturing metal parts for construction use	1,284,700	48	420
35	Can-making and sheet metal industries	1,212,569	113	953
36	Machine tool manufacturing industries (with the exception of powder and metal industries)	1,188,154	48	803
37	Paint manufacturing industries	1,172,599	15	288
38	Ballpen and marking pen manufacturing industries	1,164,067	6	441
39	Work tool manufacturing industries (with the exception of files, etc.)	1,140,828	42	649
40	Packing and transportation equipment manufacturing industries	1,116,412	37	565

Source: Same as Chart 2.

Note: As there was only one establishment for the railway carriage manufacturing industry this has been removed from the list.

“level” of technology therein, and the diversity in the “size” of the enterprises within each type of industry and at each level of technology, Higashi-Osaka area is an area in which it is possible to make any type of product, making it akin to a sort of “manufacturing department store.” Such a “manufacturing department store” bears the following advantages.

① **Enterprises Gather, Expecting Every Type of Field and Technology to Be Available**

Because enterprises utilize technology in many different fields in their business activities, it is relatively easy to obtain orders and subcontract out work. Recently, a new type of enterprise that focuses solely on core technology and planning, development, and design functions is appearing in Higashi-Osaka area; such enterprises coordinate with other enterprises to carry out manufacturing activities.

② **Machine Specialists and Design Specialists among Service Industries**

As there are many enterprises concentrated in the Higashi-Osaka area, a variety

of service industries have been established — including enterprises that maintain manufacturing and processing machines, suppliers of jigs and tools, design offices, testing studios, personnel enterprises, and small delivery services — in order to cater to those enterprises' needs.

These service industries are essential to the manufacturing industries of Higashi-Osaka area.

③ **Choices of Different Levels of Quality and Precision for the Same Processing**

As it is possible in the Higashi-Osaka area to carry out manufacturing and processing by utilizing the manufacturing functions of other enterprises, enterprises there can focus on their strengths in obtaining orders. This makes it possible for enterprises to focus on the manufacturing and processing functions that are absolutely essential to the enterprise, without taking unnecessary risks; such a strategy also makes it relatively easy to launch into new lines of business.

(2) **Test and Research Offices**

Research and development centers and testing studios for product testing and model construction, as well as for creating new processing technology, can also be found within Higashi-Osaka area.

By skillfully utilizing such functions, it is possible to develop new product development and processing methods new materials, develop new products, and carry out processing and assembly in a more efficient manner. Such strategies are facilitated in Higashi-Osaka area, where there is great diversity in terms of the "range," "level," and "size" of services, functions, personnel, and technology.

① **Testing Studios**

At Osaka Testing Office Co., Ltd. (10 employees) in Osaka City's Ikuno Ward, the testing of products and the manufacture of one-off products — each of which requires precise processing — are carried out. After receiving a sample request from an enterprise, the enterprise makes models, prepares guidance and plans, and provides advice to enterprises of all sizes regarding product development.

② **Design Offices**

Nishimura Engineering (three employees) carries out management consulting and design work in Higashi-Osaka. The enterprise receives requests for product development from enterprises of all sizes; in response, it prepares designs and models and carries out product follow-ups with regards to mass-produced items, together with providing assistance in sales route development.

The enterprise is a convenient supplier, as it is prepared to do anything from providing ideas for prototypes and assisting in product development, to introducing sales routes and clients. Large enterprises enlist design offices such as Nishimura Engineering to create prototypes, introduce manufacturing enterprises, and provide advice. After everything has been finalized, the manufacturer places an order directly with the enterprise introduced by the design office, which in turn pays a design and management consulting fee to the design office.

③ **Utilized as a Test Market by Large Enterprises**

As every type of metal processing can be performed in Higashi-Osaka, a large steel manufacturer that is actively developing new materials is currently utilizing a group of SMEs there as a test market. For example, when it has developed an especially hard metal, those businesses can process it and make prototypes to ascertain what kinds of tools, appliances, and products can be produced with it, as well as how to process it. The new material is taken to the SMEs where it is tested and developed jointly by both parties and necessary improvements are made according to use.

The “range,” “level,” and “size” of industry in Higashi-Osaka makes this process possible, together with the provision of skilled technicians and workers who have the necessary expertise.

Table 9 Comparison of Industries Concentrated in Urban and Rural Areas

	Urban Areas	Rural Area
Role	(Order-made) • Able to cope with single item orders & manufacturing. • Manufacturing of comparatively high value-added products & parts (Samples) • Test runs with high quality diverse technologies.	(Base for small range of products & mass production) • Efficient processing & assembly with a narrow range of functions. • Manufacturing of comparatively low value-added products & parts.
Concentration Pattern	• Small urban spaces. • Highly experienced technicians & skilled workers. • Close to design & development functions. • Ability to fully utilize multi-purpose machines. • Concentration of highly independent industries.	• Large open spaces • Unexperienced, low cost, ample labor. • Possible to be located far from design and development functions. • Specialized use of manufacturing machines. • Vertical or pyramid-type subcontracting structure.

3. Significance of the Accumulation of Small and Medium-Size Enterprises in the Higashi-Osaka Area

3-1 Importance of the Higashi-Osaka Area in Japan's Manufacturing Industry

(1) Groupings of enterprises in metropolitan areas of Japan have achieved rapid growth, led by processing and assembly industries such as the automobile, electrical appliance, and electronics industries. Groupings are based on the creation of a pyramid-shaped industrial structure, with manufacturing majors at the apex.

Within this structure, regional groupings have generally served as bases for the mass production of limited product ranges, whereas metropolitan groupings are engaged in high value-added manufacturing and processing (e.g., made-to-order goods and trial runs).

(2) The role of metropolitan groupings in the creation of new industries in Japan has now, more or less, achieved its goal of helping the country "catch up" with the developed nations of the West. The Japanese people are now demonstrating certain shifts in preference: from a preference for material prosperity to a preference for spiritual prosperity, and from a preference for uniformity to a preference for greater

individuality in lifestyles. This has led to the creation of new, atomized markets with short cycles, which coexist with the traditional markets. Compared to the traditional markets, demand in these new markets is less apparent; on the other hand, they contain a large number of latent niche markets that lead to the creation of new industries.

Responding to these markets in a timely fashion is important for the revitalization of the Japanese economy, but this response requires finely tuned marketing functions that can assist in identifying product needs and matching identified needs with the technologies required to meet these needs. Also required are flexible manufacturing functions, to manufacture products appropriate to these needs and technologies.

These types of functions are most easily offered by metropolitan groupings of small businesses, and metropolitan groupings such as that in Higashi-Osaka are expected to provide the infrastructure for the creation of new industries.

3-2 The Merits and Demerits of Higashi-Osaka

(1) Functions Requiring Upgrades

The following three functions will need to be upgraded in Higashi-Osaka, if the grouping is to fulfill infrastructure needs in creating new industries.

① Finely Tuned Marketing Functions, to Identify Product Needs

Small businesses have a tendency to rely on large corporations to fulfill marketing functions; however, if they are to identify and develop niche markets, the small businesses in Higashi-Osaka must upgrade their own functions in this area, so that they can connect with and exploit markets as directly as possible.

② Coordination Functions, to Match Identified Needs with the Technologies Required

Higashi-Osaka must upgrade its coordination functions—including those that make use of creative, technical, and management skills—in product planning, in order to match market needs with the technologies provided by Higashi-Osaka enterprises or by universities and major corporations.

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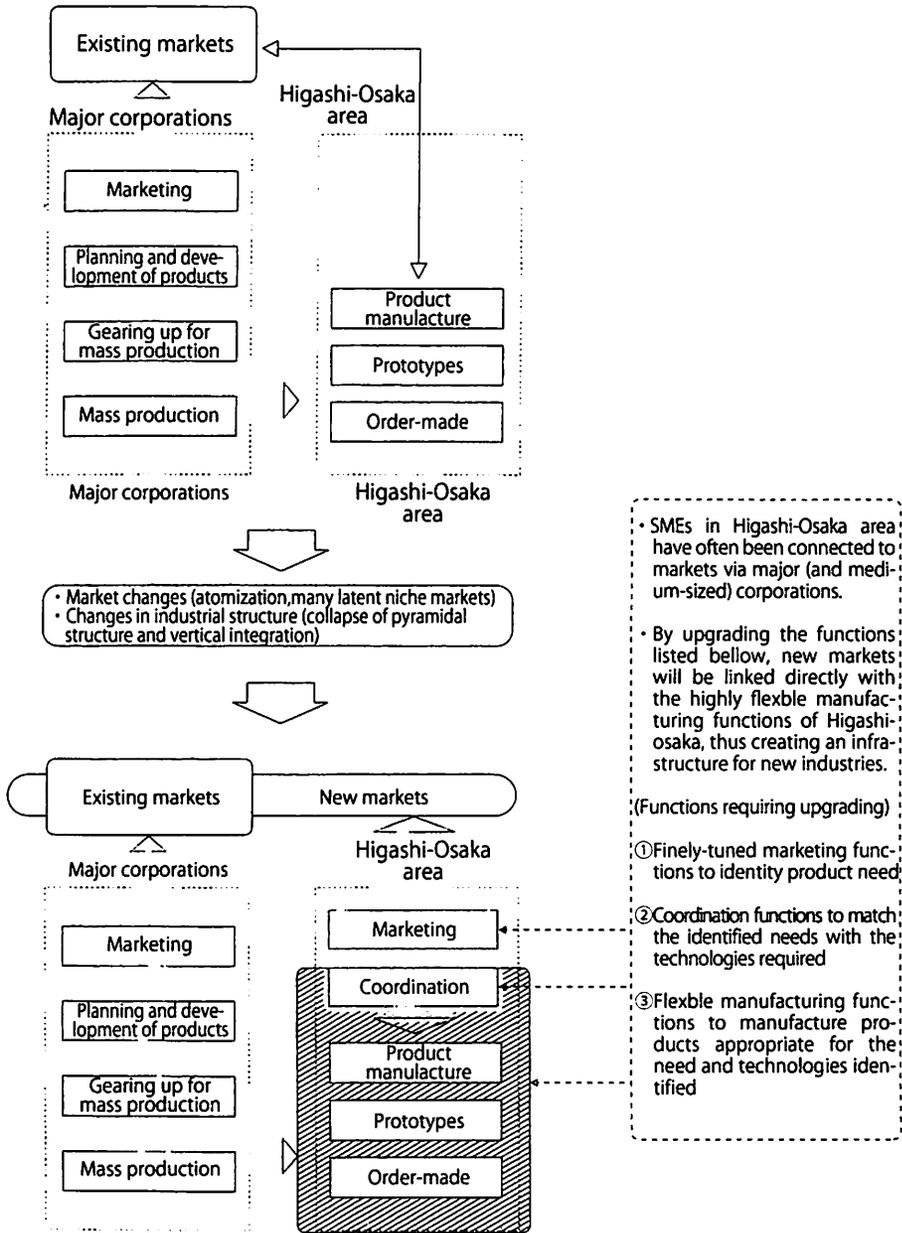


Fig 7 Functions Requiring Upgrades

③ **Flexible Manufacturing Functions, to Manufacture Products Appropriate for the Identified Needs and Technologies**

The functions already existing in Higashi-Osaka must be developed further and brought to greater maturity.

(2) **Creation of Manufacturing Think-Tanks**

In relation to the first requirement—namely, finely tuned marketing functions that can assist in identifying product needs—functions are being upgraded in Higashi-Osaka by creating “manufacturing think-tanks” that involve workshops that produce prototypes; hiring designers who plan and coordinate manufacturing; and establishing planning and development sections in major corporations, which work to respond to new markets, among other routes.

Coordination functions by which identified needs are matched with required technologies are also expected to be enhanced through connections with sophisticated processing functions related to the “manufacturing think-tanks.”

In examining the enterprises that are being coordinated, it becomes clear that enterprises in Higashi-Osaka have a strong sense of competition; while the lending and borrowing of tools is an everyday occurrence, neither the undertaking of a new entry into a group nor technical cooperation among different industries always occurs smoothly. Nonetheless, efforts to develop horizontal linkages that aim to open up new markets are in their nascent stages; for example, 14 groups have been established to foster technical cooperation among industries.

Given the size and breadth of the Higashi-Osaka grouping, however, a massive number of coordinators is required, to set up projects involving greater numbers of businesses. To achieve these initiatives, workshops that produce prototypes, designers, and very large enterprises, among other entities, should be encouraged to set up in or move into the area, and policy measures should be implemented that promote the aforementioned coordination functions.

(3) **Inadequacy of Marketing Functions**

A large number of enterprises in Higashi-Osaka produce top-level products—

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largely on account of the introduction and application of high-tech methods and upgrades to processing technologies, and also through the exercise of sound planning and innovation. In some industries, active market development is commonplace, as in markets for everyday goods. The "manufacturing think-tank" is beginning to see the results of creating new products.

Given the size and breadth of the Higashi-Osaka grouping, however, the proportion

Table 10 Outline of Inter-Industry Corporation Groups in Higashi-Osaka area

Technomics Plaza	<p>Founded: June, 1984 Chairman: Y. Masuya, President, K. K. Takayasu Sangyo No. of members: 30</p>	<p><Description> Each industry normally represented by a single member of the Higashi-Osaka Chamber of Commerce. Aims to promote inter-industry cooperation between small businesses in Higashi-Osaka in the spirit of mutual assistance, in order to foster research and development of new products and technologies, and to encourage sound development of industry in the area.</p>
Mekatoro 21	<p>Founded: May 1990 Chairman: T. Kitazawa, Topra K.K. President. No. of members: 23</p>	<p><Description> A grouping of enterprises working with mechatronics or considering its introduction. Aims to promote the exchange of know-how, technology and information among enterprises in the mechatronics field, in order to encourage high-level development in the area.</p>
Hanna New Advance Club	<p>Founded: September 1986 Chairman: K. Matsumura, Executive Director, Matsumura Alloy Dies Laboratory No. of members: 17</p>	<p><Description> Membership consists of young entrepreneurs up to age 50 in the Eastern district, centered around the marketing division of the head office of the Hanna credit association. Aims to contribute to the creation of business opportunities and enhancement of management skills by sharing opportunities for expanding vision and changing outlook, to enable members to respond to a changing business environment.</p>
Hanna New Action Club	<p>Founded: April 1987 Chairman: Y. Yamamoto, President, Kongo Shiko K.K. No. of members: 17</p>	<p><Description> Membership consists of young entrepreneurs up to age 50 in the Eastern district, centered around the marketing division of the head office of the Hanna credit association. Aims to contribute to the creation of business opportunities and enhancement of management skills by sharing opportunities for expanding vision and changing outlook, to enable members to respond to a changing business environment.</p>

Atsumaro -kai	Founded: Chairman: No. of members:	April 1988 T.Nishio, President, K.K. Nishino 17	<Description> Members of the Osaka Prefecture Small Business Promotion Association.
Kokukin Higashi- Osaka Kon'wakai	Founded: Chairman: No. of members:	February 1993 M. Tachibana, President, K.K. Daisan Kasei 18	<Description> Membership consists of businesses dealing with the Higashi-Osaka branch of the People's Finance Corporation, and other related small businesses. Aims to promote exchange of information, education and goodwill among members, in order to contribute to the improvement and revitalization of business management.
Vortex Higashi- Osaka	Founded: Chairman: No. of members:	May 1989 E. Nakanishi, Preseident, K. K. Nakanishi Tekkosho 38	<Description> Inter-industry group centered on young entrepreneurs.
Higashi- Osaka Rugby Goods Club	Founded: Chairman: No. of members:	October 1992 E. Nakanishi, President, K.K. Nakanishi Tekkosho 24(incl. Individuals)	<Description> Aims to promote the development of "rugby goods" through the sharing of know-how and ideas among commercial and industrial organizations, their employees and private citizens, in order to promote Higashi-Osaka as a "rugby town".
Asunaro Kyodo-juchu (collaborative order- taking)Group	Founded: Chairman: No. of members:	April 1980 Y. Yoshida, President, K.K. Kounoike Kinzoku Seisakusho 7	<Description> The business environment for small businesses is becoming increasingly severe, and parent enterprises tend increasingly to issue orders for multiple unit processing, which involves manufacturing processes relating to different industries. Our aim is to respond to demand for rationalization and lower costs by promoting collaborative order-taking among different industries, under the direction of the Higashi-Osaka Subcontractors Promotion Association.
Geartech	Founded: Chairman: No. of members:	November 1995 M. Yamamoto, President, Yamamoto Sangyo K.K. 20	<Description> Membership consists of normally one enterprise representing each industry, covering a number of industries in the city. Aims to promote technical development, exchange of information, and contribution to the local community based on a spirit of mutual cooperation among members, implementing collaborative projects as necessary, in order to promote economic initiative among members and to enhance their economic standing.

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Torai-no-kai	Founded: November 1995 Chairman: N. Takahara, President, Takahara K. K. No. of members: 24	<Description> Aims to Promote technical development, exchange of information, and contribution to the local community based on a spirit of mutual cooperation among members, implementing collaborative projects as necessary, in order to promote economic initiative among members and to enhance their economic standing.
Tops Hishi-Osaka	Founded: June 1996 Chairman: Y. Oshima, Chairman, Meiwa Gravure K.K. No. of members: 49	<Description> Membership comprises enterprises with top-share products and unique technologies. Aims to promote cooperation between members and to engage in wide-ranging PR activities in Japan and overseas, in order to create new business opportunities.
Hideyoshi	Founded: June 1996 Chairman: S. Nakamura, President, K.K. Merix No. of members: 10	<Description> Study group formed by small business entrepreneurs aged around 20-40. All members attend each other's board meetings, to offer business advice from the standpoint of a third party.
Kyoei-kyodo-juchu (collaborative order-taking) Group	Founded: October 1980 Chairman: T. Aoki, President, K.K. Aoki No. of members: 5	<Description> Collaborative order-taking formed by members of the Osaka Prefecture Small Business Promotion Association

Source: "WANTED '96", Higashi-Osaka Inter-industry Cooperation Groups Liaison Consil

of enterprises exercising such marketing functions is still small; certain policy measures should be instituted, to encourage the creation of marketing support functions.

(4) Decrease in the Number of Enterprises

① Significance of the Decrease in the Number of Enterprises

Higashi-Osaka functions as one of the "metropolitan groupings" that underpin the Japanese manufacturing industry; the functions expected to generate the infrastructure needed by new industries in the future will be driven by the breadth, stratification, and diversity of business in the area. The maintenance and development of these characteristics are important to the future of Higashi-Osaka. However, there has been a decline since 1990 in the number of enterprises in the area, resulting in a situation bearing the following features:

- There is decreased diversity within most industries (i.e., fewer enterprises in each industry).
- Among the various “layers” of the business community, small and very small enterprises in particular are losing their fundamental technologies. The relative diversity of the business community has meant that no particular layer has been entirely lost as yet, but the current situation and its effects must be accurately assessed and planned for.
- The diversity built up in the past has prevented the loss of “breadth” (i.e., loss of an entire industry), but here too, the current situation and its effects must be accurately assessed and planned for.

The expression “hollowing out” tends to imply the loss of a particular manufacturing function or a particular level of technology, but the decrease in the number of enterprises in Higashi-Osaka appears to represent a kind of “depopulation” that would lead ultimately to such a “hollowing out.”

② Causes of Depopulation, and Topics to Be Addressed

i) Overseas Relocation of Major Corporations’ Production Bases

Compared to corporate groupings that depend upon a particular large corporation — a situation characterized by a fragile, vertically oriented subcontracting relationship with a particular client — Higashi-Osaka contains a large number of relatively independent small businesses that serve multiple clients nationwide. The Higashi-Osaka grouping is thus able to respond flexibly to a recession in any given industry.

Nonetheless, the type of vertical network that was typical in processing and assembly industries during the period of rapid economic growth (i.e., major manufacturer → primary subcontractor → secondary subcontractor → tertiary subcontractor) can also be found within the high-diversity Higashi-Osaka grouping, where some enterprises are subcontractors for Sanyo, Matsushita, and auto manufacturers, among others.

One major cause of the recent decline in the number of enterprises in the grouping has been the drop in the number of orders received, especially as parent

enterprises and other clients relocate their production bases overseas. Concurrently, small businesses that have relied upon parent enterprises for marketing and development functions are losing these functions for the same reason. The upgrading of marketing functions is thus an important step in combating area depopulation.

ii) Deterioration of Conditions Conducive to Locating or Starting Businesses

The following observations have been made regarding the deterioration of conditions in Higashi-Osaka *vis-à-vis* locating or starting businesses. (The points listed below that relate to the deterioration of business location conditions are based on the 1996 Osaka Economy White Paper.)

⟨Deterioration of business location conditions⟩

- Space unavailable for expansion into neighboring or nearby areas
- Difficulties in extending or renovating factories, due to legal restrictions under the *Factories Restriction Act*, etc.
- The area is not sufficiently prestigious in bolstering a enterprise's corporate image
- Worsening traffic conditions disrupt distribution
- Conflict between residents of apartment blocks built on former factory sites, and neighboring or adjoining factories

⟨Deterioration of business start-up conditions⟩

- High land costs along the Kinki Expressway [i.e., 1 million yen per *tsubo* (i.e., 3.3 m²)], compared to surrounding areas
- Initial capital investment and start-up funds have risen to the 20-30-million-yen range
- Greater technical sophistication in niche markets has made it difficult for individuals operating single machines to start their own businesses
- Under such conditions, new and profitable businesses tend only to be spin-offs or subsidiaries of large enterprises, or the like, rather than a enterprise established via the traditional, independent route

iii) Shortage of Successors Causes a Lack of Drive among Business Owners

As the emphasis of the Japanese economy shifts more towards the service sector, young people are tending to find industries such as services and software more attractive than manufacturing. Few young people find small business manufacturing appealing; this attitude is epitomized by the catchphrase “3K” (short for “dangerous, dirty, and difficult” in Japanese), which explains why young people avoid such jobs. Small businesses in Higashi-Osaka are now finding it difficult to recruit employees, but the greatest problem of all is the lack of young people willing to take over the management of small businesses when the present owners retire. This lack is demoralizing for the present owners, who tend to lose their drive and enthusiasm as a result.

Notes

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