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**Inter-regional Input-Output Analysis between Aichi
Prefecture, Japan and Coastal Regions of China**

by
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Abstract

Based on the available input-output tables of the year 2000, we estimate an inter-regional I-O table between Japan and China, in which Aichi Prefecture in Japan and the coastal regions in China are the focus. Using this table, we evaluate the degree of interdependence between these regions in 2000. Though the interdependence between Aichi and the Coast regions is not so strong, we can observe some differences in the pattern of influences. Furthermore, we examined the impact of the overseas production of information and communication equipment sector and transport equipment sector in the Coast regions. We find that the negative impact, which is brought about by overseas production in the transport equipment sector seeking a new market in China, is lower than that of the information and communication equipment sector shifting the domestic production plants to China.

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1. Introduction

After the 1970's, the economies of East Asian countries have grown rapidly; at first Asia NIES followed Japan, then ASEAN started to grow, and recently China has joined in the group. In China, the growth of the coastal regions is prominent; more than 10 percent in GRP growth during the 1990's. The investment inflow from abroad contributes to such high growth.

Table 1 (p.17) shows that the accumulated inflow of direct investment in China is 1096.6 billion US dollars in contract base and 572.1 billion US dollars in actually utilized base. The actually utilized investment amounts to 40-60 billion US dollars per year after the year 2000, and 70 percent of the investment is concentrated geographically in the coastal region. If we divide the coastal region into two parts, central and other, then the share of the central coastal region in total investment increases from about 10 percent in the first half of the 1990's to about 40 percent in the latter half. On the other hand, the other coastal region posted a loss of share from about 60 percent to about 40 percent for the corresponding years.

Looking at the countries investing in China (see **Figure 2**, p.19), the NIES four countries and economies including Hong Kong invest the largest amount, accounting for half of the regional share. According to the China Statistical Yearbook, the foreign direct investment from Japan amounts to 3-5 billion US dollar for the 2000's, and its share is 7-9 percent. This amount is almost the same as the direct investment from US or EU 15 countries. The Basic and Trend Survey of Overseas Business Activities of METI, Japan, shows that the direct investment from Japan in China amounted to 1.693 billion US dollars in 2000, which is lower than that indicated in the Chinese statistics. The survey shows that sales of overseas firms in China amount to 33.55 billion US dollars for industry as a whole, 26.48 billion US dollars for manufacturing industries, and 11.05 billion US dollars for electrical machinery industries.

The interdependence among East Asian Countries has been strengthened via international trade and capital flow. The trade pattern has been changing from the trade between sectors to that within sectors. Foreign direct investment has been heavily

in the economic development in East Asian countries.

For investing countries, the hollowing in manufacturing industries and the incubation and promotion of new industries have become important issues. The recent industrial cluster promotion policy in Japan aims to grow the industries that might be competitive in the global market (*ref.*, **Table 1**, p.16, **Table 2**, p.17, **Table 3**, p.18).

The Asia International Input-Output Table is useful as a framework for investigation of the interdependence of East Asian Countries through industrial and trade transactions. The estimation and many applications of Asia International Input-Output Tables by the Asia Developing Institute (IDE) show that they are important tools for such research.

On the other hand, the importance of regional studies in East Asian countries is increasing, because we know that China is not uniform geographically, for example. Looking at the Japanese economy, there is a difference in regional economic structure, and we should understand the future plausible industrial structure in light of such regional characteristics.

For regional input-output analysis in China, Shuntaro Shishido, Kazumi Kawamura, and Fan Wen Hui (1996) made an Input-Output table for Heilongjiang Province, China. Zai-zhe Wang (2002) used the input-output Table for Shanghai. Ichimura and Huijiong Wang (2004) made the 1987 interregional input-output table for China, which had 7 regions with 9 sectors, while the IDE (2003) constructed the 2000 interregional input-output table for China, which had 8 regions with 30 sectors.

There are two types of international input-output tables connecting Japan and China; the Japan-China tables and the Asia tables, which link ten countries including Japan and China. IDE has made long efforts to compile those tables. These tables provide very important statistics for investigating the interdependence between Japan and China. However, there is no table connecting regions within these two countries.

Thus, we here focus our attention on the interrelations between Japan and China in terms of regional bases. We focus on Aichi Prefecture in Japan, and the coastal regions (Central and Other) in China. Manufacturing industries in Aichi Prefecture are relatively strong in market competition. Coastal regions, on the other hand, are leading

rapid economic growth in China, using foreign investment. We will here develop a Japan-China inter-regional input output table, in which five regions appear; two regions in Japan and three regions in China. Then we will make some simulation analysis on the interdependence among them.

2. Method and Database

To capture the interdependence between Aichi Prefecture in Japan and two coastal regions in China, we attempt to develop an interregional input output table between them. Here, the Yangzte Delta area is defined as the Central Coast area including Shanghai City, Jiangu Province, and Zhejiang Province.

There are two ways to approach such an input-output table. One is to divide geographically a Japan-China Input-output table of countries into corresponding regions by some method to maintain consistency between the two tables. The other is, contrarily, to combine regional tables in each country to create an international table. In the latter case, we need information on international trade between these regions.

Input-output tables available to us are the Input-Output Table of Japan and regional tables. Regional input output tables⁽¹⁾ of METI are also available for nine regions in Japan. There are also input-output tables for each prefecture in Japan. For China, many cities and provinces have their own input-output table. However, the tables published are usually integrated into major sectors, and detailed tables are often not available. Fortunately, the IDE provided a Chinese inter-regional input output table for the year 2000, which is available to us. This table covers eight regions, one of which is the central coastal region, the Yangzte Delta area.

In this study, we apply the latter method, considering the availability of data and the ease of the method. At first, we draw up a regional input-output table for each country; a two-region-interregional I-O table 2000 for Japan, Aichi and Others, and a three-region-interregional I-O table 2000 for China, the Central Coast, Other Coast, and Other. We thus obtain a five-region-interregional I-O table, which we combine into one table.

2.1 Two-region-interregional I-O table 2000 for Japan

Using two input-output tables for Japan and Aichi, respectively, we subtract the value of transactions in Japan from those in Aichi to obtain an input-output table for the other regions of Japan. We know that the internal export to other regions of Aichi is equal to the internal imports of the other regions from Aichi and vice versa. Thus using the average interregional transaction ratio of each sector, we can estimate a two-region-interregional input-output table for Japan, Aichi and others. Here we arrange this table as a non-competitive type in terms of international imports. Then we convert the values of the table from yen to US dollars using the exchange rate for the given year. **Figure 1** (p.19) illustrates the table.

2.2 Three-region-interregional I-O table 2000 for China

For China, we use the inter-regional I-O table for 2000. This table contains eight regions of China, and is a table of competitive type in terms of international imports. Using this table, we integrate these regions into three; Central Coast, Other Coast, and Other. We change the table from that of competitive type in terms of international imports to that of non-competitive type. Also, we convert the values in this table from Yuan to US dollars, using the exchange rate for this year. This table is shown in **Figure 2** (p.19).

2.3 Five-region-interregional I-O table for Japan and China

To integrate these two interregional I-O tables into one, we must separate the import values of each from the total import value. Here we use the information from the Asia international I-O table of IDE. The IDE table contains the import values, intermediate goods and final products, of Japan from China and those of China from Japan. Those values are evaluated in the producer's price, because the imports of these countries are expressed as endogenous sectors. We then calculated the respective import shares of China in Japan and those of Japan in China. Using these shares, we estimate the import value, in the producer's price, of each Japan region from China and those of each China region from Japan.

In the next step, we must separate the import value of Aichi from China to those from each of China's regions. Unfortunately, we have little statistical information for this procedure. Then we assume that the import from each region depends on the export capacity of each corresponding region, and we estimate it using the export share of each region in China. For the other regions in Japan and China, we apply the same assumption to obtain the import value from each region. **Figure 3** (p.20) shows the procedure.

Finally, we combine these two I-O tables of Japan and China into one table, namely the Japan-China 5-region-interregional I-O table as shown in **Figure 4** (p.20).

3. Estimation of I-O Table

The correspondence of the classification for each I-O table is shown in **Table 4** (p.21). The Chinese Interregional Input-Output Table 2000 by IDE has 30 sectors for each region, while its Asia International input output table 2000 has 76 sectors for each country. The Japan Input-Output table 2000 by the Ministry of Internal Affairs and Communications, and others, has a more detailed table than the above tables. Here we use a table with a 104-sector classification. We defined 26 sectors here, comparing the classification of these I-O tables.

Table 5 (p.21) shows the regional definition in our analysis, with three defined regions⁽²⁾, in comparison with the Chinese Interregional Input-Output Table 2000, IDE, in which eight regions appear.

We compile a 5-region-26 sector interregional input-output table for Japan and China. However, **Table 6** (p.22) shows the 5-region-one sector table that is integrated by sectors. From this table, we find that the output is 0.684 trillion dollars for Aichi, and 8.213 trillion dollars for the Other in Japan, against 0.558 trillion dollars for the Central Coast region, 0.817 trillion dollars for the Other Coast region, and 1.038 trillion dollars for the Others in China.

Figure 5 (p.22) shows the output and industrial structure of each region. The total output in Japan is about 4 times larger than that of China. The economic scale of

Aichi Prefecture in Japan is almost the same size as that of the Central Coast region and the Other Coast region in China. **Figure 8** (p.25) shows the industrial structure of each region by bar graph. The output of the service sector is the largest in Aichi and the transport equipment sector has a large manufacturing output. However, in China, the service sector output is not so large as in Japan. Food products, textiles, apparel, chemicals, general machinery, electric machinery, and precision instruments show a larger output. Of course, the agriculture output is large.

The comparative advantage in regional output in Japan and China is observed in **Table 7** (p.23). Aichi has the edge in transport equipment and textiles, compared to the other regions of Japan. Non-metallic minerals, primary metals, general machinery, electric machinery, and information and communication equipment follow. The Central Coast region has the greatest edge in textile products, followed by sectors like apparel, general machinery, electric machinery, information and communication equipment, and precision instruments. The Other Coast region, on the other hand, has the highest comparative advantage in information and communication equipment, followed by apparel, paper and pulp, electric machinery, and precision instruments.

Figure 7a, **Figure 7b**, and **Figure 7c** (pp.24-25) show the regional shares of sale transactions in each sector for Aichi, the Central Coast, and the Other Coast, respectively. Direct demand from China to Japan is not so large in any sector, though a little share is observed in sectors like textiles, chemicals, primary metal, general machinery, and electric machinery. On the other hand, the direct demand of Japan to the two coastal regions is large for apparel, wood and wood products, electric machinery, information and communication equipment, precision instruments, and miscellaneous manufacturing. The oil and gas sector is added to the Other Coast region. However, the demand of Aichi on the two coast regions is not so large (also *ref.* , **Figure 6**, p.23).

Figure 8 (p.25) shows the international trade between Aichi and each Chinese region by sector. Negative values show the import of Aichi from China, and positive values display the export of Aichi to China. Aichi exports products including transport equipment, electric machinery, primary metal, metal products, chemical products, and textiles to China. In these sectors, Aichi has the relative advantage. On the other hand,

China exports to Aichi include apparel, textile products, food, primary metal, electric machinery, information and communication equipment, and miscellaneous manufactured products. Aichi export to the Central Coast region is relatively large in terms of general machinery and transport equipment, and the import of apparel and primary metals is relatively most important.

Figure 9 (p.26) shows the regional impact of one-unit increase in the final products of each sector in Aichi, which are deduced as the row vector of Leontief-inverse matrix. Because the impact on other region of Japan is much stronger than on China, they are shown on a different scale; the left-hand axis for the others in Japan and the right-hand axis for the regions in China. **Figure10a** (p.26) picks up only the Chinese parts in Figure 9 separately as a bar graph. The impact on China appears strong in sectors in which the imports are larger from Aichi. Textile products and apparel are strongly affected, and the effects on the Central Coast region and the Other Coast region are large. However, with respect to primary metal, the effect on other regions of China is greater than or equal to, those of the two Coast regions.

Figure10b (p.27) shows the impact of each region's increase in demand for final products on Aichi. From this figure, the impact of the two coast regions on Aichi in any sector is stronger than that of the other region in China; the impact of transport equipment is the strongest, followed by primary metal, general machinery, electric machinery, information and communication equipment, and precision instruments. Textiles and apparel also have a relatively large impact.

Table 8 (p.28) shows the regional contributions in terms of value added and import, that are induced by one-unit increase of each final demand. With any case of Aichi or the other regions in Japan, the contribution of regions in China is very small or almost negligible. In case of textiles and apparel, the contribution of China as a whole is about 5-7 percent, and less than one percent for the other sectors in Aichi. On the other hand, the contribution of Japan as a whole to each region of China is 3-6 percent in machinery sectors, and that of Aichi only is very small in terms of the internal contribution.

4. Simulation analysis

Here we conduct two simulations using the estimated multi-regional I-O table of Japan and China.

4.1 Evaluation of regional linkage in terms of the product induced by final demand

First, we evaluate the interdependence between Aichi and the two coast regions in China by the product induced by final demand for each sector. **Figure 11a** and **Figure 11b** (p.30) show the induced product of two coast regions in China, induced by the consumption and investment in Aichi. The sectors largely affected by Aichi's final products are textiles and apparel for both coast regions in China, followed by chemicals. In terms of the textile sector, the Central Coast region is more affected than the Other Coast region, and for apparel vice versa. On the other hand, the impact on Chinese machinery sectors from Aichi's consumption and investment demand is not so large. We find that Aichi's consumption goods affect both coast regions in China more strongly than investment goods.

The effect of consumption and investment in two Chinese coast regions induced in each sector of Aichi is seen in **Figure 12a** and **Figure 12b** (p.31). The impact on general machinery and transport equipment in Aichi is prominent, followed by primary metal, metal product and electric machinery. We also find the effect of investment is stronger than that of consumption in both figures. Even in the effect of consumption, the impact on transport equipment is the highest. Textiles, in which Aichi have the comparative advantage in Japan, sustains a relatively large impact.

We examine the effect of exports to third countries, which can be seen in **Figure 13a** and **Figure 13b** (p.32). Figure 13a shows the sectoral product of each region in China, induced by the exports of Aichi to countries except China, while Figure 13b shows the sectoral product of Aichi induced by the exports of each region in China to countries other than Japan. From these figures, we find that the effect of Aichi exports on China is strong in primary metal, chemicals, machinery sectors, textile, and miscellaneous manufacturing, because Chinese exports require Japan's material goods and parts.

These effects are stronger in cases of export from Coastal regions in China, though the effect on primary metal is strongest in the case of the Non-coast region in China.

On the other hand, transport equipment, primary metal, textiles, and chemicals undergo the prominent effect of the exports of Chinese regions. Chinese apparel has a competitive advantage in the world market, the material product of which China gains partly from Aichi. The effect on Aichi is dominant from both coast regions of China, and that of the rest of China is very small.

4.2 Direct investment of Aichi's manufacturing firms in China

Here we evaluate the regional effects when Aichi's manufacturing firms invest in two coastal regions.

At first, we assume that information and communication equipment firms invest in the Central Coast region with the ability of one percent increase in the production, 0.17378 billion US dollars, that the Japanese subsidiaries have in the region. The amount of production in Aichi's information and communication equipment sector is 11.31386 billion US dollars, and the assumed value is about 1.5 percent of Aichi's production in the same sector. Furthermore, we assume that 40 percent of the increased product is exported to the Japanese market, and that the rest is sold in the local market or in a third country. Also, domestic product in the same sector of Aichi is assumed to be decreased by the same amount of increased imports from China, 69.51 million US dollars. At the same time, we assume that 40 percent of the intermediate inputs is purchased from Japan, 30 percent from the local market, and the rest from the other countries in the world. These assumptions are determined by taking into account the regional shares of production sales and the regional shares of input purchases with respect to Japanese subsidiaries in the Chinese market (See **Table 9a** and **Table 9b** (p.33) from the METI Basic and Trend Survey of Overseas Business Activities.)

Table 10a and **Table 10b** (p.34) show the results. The increase in the production of Aichi's firms in China affects the production in each Chinese region. Induced production in the Central Coast region is 242.89 million US dollars, the other Coast region 20.35 million US dollars, and the other region in China 16.45 million US dollars.

The production in Aichi is also increased by 5.60 million US dollars, the other regions in Japan 110.85 million US dollars, and import (from the third countries) is 14.65 million US dollars. The total increase amounts to 410.79 million US dollars. The induced effect on Japan is 116.45 million US dollars as a whole.

On the other hand, the domestic decrease in production, substituted by the import from China, has a negative effect on internal production. In Aichi the production decreases by 98.55 million US dollars, and the other regions in Japan by 58.18 million US dollars. Of course, China and the third countries receive a negative effect; 1.97 million US dollars and 8.00 million US dollars, respectively.

The first column from the right hand side in **Table 10a** (p.34), “Overall effect,” shows the overall effect, which is calculated by summing the two opposite effects; the induced effect and the substituted effect. We find that a positive effect appears in the Central Coast region in China, where Aichi firms invest. However, a negative effect is observed in Aichi, whose firms advance into China.

Table 10b (p.34) shows the sectoral effect for each region. The dominant effect appears in the information and communication equipment sector of the Chinese Central Coast region and Aichi, in opposite directions. The service sector gains in relatively large effect. In the other regions in Japan, the positive effect induced by the production in China overcomes the negative effect brought about by the reduction in Aichi production. The overall effect amounts to 52.67 million US dollars. However, Japan as a whole receives a negative effect of production by 40.29 million US dollars, because the production in Aichi is reduced by 92.96 million US dollars, which is larger than that in the other regions. In China, a positive effect in production is expected in the amount of 277.72 million US dollars. For Aichi’s firms, which make overseas investments in China, the production shift from Aichi to China yields more production as a whole, even though Aichi’s own production is reduced.

Second, we consider that Aichi firms in the transport equipment sector invest in new production plants in the other Coast region. Here we assume one percent of the local production in transport equipment sector, which amounts to 185.94 million US dollars and 0.128 percent of the Aichi production in transport equipment sector,

145.14961 billion US dollars. In the first case of the information and communication equipment sector, we consider that Japan is a part of the important market for the products. However, in this case the main market is considered to be China. Actually, a look at Table 9a reveals that the sales share for export to the Japan market is as low as 10 to 15 percent. Here we assume that the domestic production will reduce by 10 percent the worth of local production in China. Furthermore, referring to regional shares of the input purchases in the overseas subsidiaries in China (Table 9b), we assume that half of the intermediate input will be imported from Japan, mainly Aichi, and the rest will be purchased in the Chinese local market.

Table 11a and **Table 11b** (p.35) show the results. The production of the transport equipment sector, 185.94 million US dollars, induces production in the concerned region by 320.20 million US dollars, in China as a whole by 371.02 million US dollars, and Japan as a whole by 176.10 million US dollars; Aichi by 37.96 million US dollars and the rest in Japan by 138.14 million US dollars, respectively. The induced production is larger than that in the information and communication equipment case.

As for the substitution effect, the domestic production decreases by 36.84 million US dollars in Aichi, and 14.65 million US dollars in the rest of Japan. These reductions amount to 51.50 million US dollars in Japan as a whole. The effect in China is very low, 0.51 million US dollars.

In this case, though the production of the transport equipment sector is reduced in Aichi as the substitution effect, the internationally induced effects from China production is slightly larger. Thus, the overall effect brings about an increase in production by 1.11 million US dollars. No region has a negative overall effect.

Table 11b shows the sectoral effects for each region. The dominant effects appear in the concerned sector of the other Coast region, China and the other region, Japan. The transport equipment sector in Aichi only decreases its production by 5.40 million US dollars, and all other sectors will be expected to have a positive effect. Of course, firms have the incentive to invest in China, because their production including the overseas production will increase.

5. Concluding Remarks

Based on the available input-output tables for the year 2000, we estimate an inter-regional I-O table between Japan and China, in which Aichi Prefecture in Japan and the Coastal regions in China are the focus. Using this table, we can evaluate the degree of interdependence between these regions in 2000.

We find that the interdependence between Aichi and Central Coast has not been so strong through international trade, at least in the year 2000. However, we can observe some difference in the pattern of the influence. Capital goods in Japan are connected to the Chinese economy, while consumer goods in China are related to the Japanese economy. After 2000, the interdependence through international trade between Japan and China has been strengthened, so the regional interdependence would be expected in the same situation.

Furthermore, we examined the impact of the overseas production of the information and communication equipment sector and transport equipment sector in the Coast regions. If the re-import effect, for which imported goods substitute for domestic products in Japan, is strong, a reduction in product would occur. We find that the negative impact, which is brought about by overseas production in the transport equipment sector seeking a new market in China, is lower than that of the information and communication equipment sector transferring the domestic plant to China. Of course, this result heavily depends on the assumption of the scale of the production and the degree of substitution.

Interregional input output analysis between regions in different countries is one of the most valuable tools for the investigation of international trade and FDI, though more detailed information on the activities of foreign direct investment in regional base is necessary for such analysis.

(1) Chubu region Input-Output table is one of the METI regional tables. The Chubu region consists of five prefectures: Aichi, Gifu, Mie, Toyama, and Ishikawa. There is also an input-output table for the Tokai region, that

includes three prefectures: Aichi, Gifu, and Mie. The so-called “Greater Nagoya” region might correspond to the Tokai region that includes Aichi Prefecture.

(2) Another definition of three regions, that is also shown in Table 5, is sometimes used: Eastern Region, Central Region, and Western Region. This definition was first used in the 7th 5-year plan of the Chinese government as the “Three Major Economic Regions.”

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Data Source

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Table 1 Direct investment in China

Unit: 100 million US dollars

	A: Foreign Direct Investment (FDI) (Contracted Base)		B: FDI (Actual Base)	Ratio (B/A)	C: Actual FDI by Region			Regional Shares (C/B) %		
	Number of Projects	Value	Value	%	Central Coast	The Other Coast	Rest of China	Central Coast	The Other Coast	Rest of China
1979-1983	1392	77.42	18.02	23.28						
1984	1856	26.57	12.58	47.35						
1985	3073	59.32	16.61	28.00						
1986	1498	28.34	18.74	66.13	2.07	12.03	3.31	11.1	64.2	17.7
1987	2233	37.09	23.14	62.39	2.84	9.08	2.58	12.3	39.3	11.1
1988	5945	52.97	31.94	60.30	3.66	17.97	3.78	11.5	56.3	11.8
1989	5779	56.00	33.93	60.59	5.68	20.85	4.04	16.7	61.4	11.9
1990	7273	65.96	34.87	52.87	3.47	23.55	4.67	9.9	67.5	13.4
1991	12978	119.77	43.66	36.45	4.57	32.41	7.28	10.5	74.2	16.7
1992	48764	581.24	110.97	19.09	21.97	71.51	16.56	19.8	64.4	14.9
1993	83437	1114.36	275.15	24.69	70.36	146.89	56.17	25.6	53.4	20.4
1994	47549	826.80	337.67	40.84	73.87	195.57	63.24	21.9	57.9	18.7
1995	37011	912.82	375.21	41.10	93.41	212.03	66.71	24.9	56.5	17.8
1996	24556	732.76	417.26	56.94	106.72	237.97	74.11	25.6	57.0	17.8
1997	21001	510.03	452.57	88.73	111.64	243.11	94.26	24.7	53.7	20.8
1998	19799	521.02	454.63	87.26	115.51	248.62	88.70	25.4	54.7	19.5
1999	16918	412.23	403.19	97.81	101.47	232.06	65.82	25.2	57.6	16.3
2000	22347	623.80	407.15	65.27	111.98	216.44	74.91	27.5	53.2	18.4
2001	26140	691.95	468.78	67.75	134.18	244.09	85.40	28.6	52.1	18.2
2002	34171	827.68	527.43	63.72	175.38	245.08	104.26	33.3	46.5	19.8
2003	41081	1150.69	535.05	46.50	210.13	215.49	103.78	39.3	40.3	19.4
2004	43664	1534.79	606.30	39.50						
1979-2004	508941	10966.09	5621.05	51.26						

This table is made by using the data from Chinese Statistical Yearbook.
See Table 6 for definition of regions.

Table 2 Direct Investment in China by Countries

Unit: 100 million US dollars

	Total	Japan	NEIS4	ASEAN4	EU15	USA	Others
1986	22.44	2.63	13.42	0.11	1.76	3.26	1.25
1987	23.14	2.20	16.20	0.15	0.53	2.63	1.43
1988	31.94	5.15	21.23	0.11	1.57	2.36	1.52
1989	33.93	3.56	21.62	0.16	1.88	2.84	3.87
1990	34.87	5.03	19.64	0.10	1.51	4.56	4.03
1991	46.67	6.10	31.09	0.30	4.44	3.31	1.44
1992	112.92	7.48	90.06	1.46	2.68	5.19	6.05
1993	277.71	13.61	214.57	5.14	6.90	20.68	16.80
1994	339.46	20.86	251.20	6.92	15.44	24.91	20.13
1995	378.06	32.12	262.58	7.65	21.52	30.84	23.35
1996	421.35	36.92	280.85	9.37	27.43	34.44	32.34
1997	452.57	43.26	286.70	8.11	41.71	32.39	40.39
1998	454.63	34.00	266.31	7.94	39.79	38.98	67.60
1999	403.19	29.73	228.79	6.32	44.79	42.16	51.39
2000	407.15	29.16	214.58	6.65	44.79	43.84	68.13
2001	468.78	43.48	239.93	8.26	41.83	44.33	90.94
2002	527.43	41.90	268.90	8.63	37.11	54.24	116.65
2003	535.05	50.54	276.24	7.95	39.30	41.99	119.03
2004	606.30	54.52	303.72	9.01	42.39	39.41	157.25
Shares (%)	Total	Japan	NEIS4	ASEAN4	EU15	USA	Others
1986	100.00	11.74	59.83	0.49	7.83	14.54	5.58
1987	100.00	9.50	70.02	0.66	2.28	11.36	6.19
1988	100.00	16.11	66.48	0.36	4.92	7.39	4.75
1989	100.00	10.50	63.72	0.47	5.53	8.38	11.40
1990	100.00	14.44	56.32	0.29	4.32	13.08	11.56
1991	100.00	13.06	66.63	0.64	9.51	7.09	3.08
1992	100.00	6.63	79.76	1.29	2.37	4.60	5.36
1993	100.00	4.90	77.27	1.85	2.48	7.45	6.05
1994	100.00	6.15	74.00	2.04	4.55	7.34	5.93
1995	100.00	8.50	69.46	2.02	5.69	8.16	6.18
1996	100.00	8.76	66.65	2.22	6.51	8.17	7.67
1997	100.00	9.56	63.35	1.79	9.22	7.16	8.92
1998	100.00	7.48	58.58	1.75	8.75	8.58	14.87
1999	100.00	7.37	56.75	1.57	11.11	10.46	12.75
2000	100.00	7.16	52.70	1.63	11.00	10.77	16.73
2001	100.00	9.28	51.18	1.76	8.92	9.46	19.40
2002	100.00	7.94	50.98	1.64	7.04	10.28	22.12
2003	100.00	9.45	51.63	1.49	7.35	7.85	22.25
2004	100.00	8.99	50.09	1.49	6.99	6.50	25.94

This table is made by using the data from Chinese Statistical Yearbook.

Table 3 The Overseas Activities of Japanese Firms (2000)

Number of Overseas Affiliated Companies	Total	Asia	China		
			Mainland	Hong Kong	
Total	14,991	7,244	2,530	1,712	818
Manufacturing, Total	7,464	4,487	1,540	1,263	277
Food products	394	223	108	92	16
Textile products	525	415	255	224	31
Paper and Pulp	119	59	22	21	1
Chemicals	1,055	634	175	142	33
Petroleum and Coal	34	20	7	x	-
Iron and Steel	266	174	56	52	4
Nonferrous metal	195	127	39	32	7
General machinery	764	391	130	105	25
Electric machinery	1,827	1,126	382	283	99
Transport equipment	1,036	525	108	106	2
Precise instruments	269	133	58	32	26
Miscellaneous manufacturing products	980	650	200	167	33
Non-manufacturing, total	7,527	2,757	990	449	541
Agriculture, forestry, and fishery	125	37	14	13	1
Mining	160	19	3	2	1
Construction	362	225	34	13	21
Wholesale and retail trade	3,645	1,397	534	204	330
Services	1,443	474	207	125	82
Other	1,792	605	198	92	106
Investment 100 Million US dollars	Total	Asia	China	Main Land	Hong Kong
Total	305.03	98.55	24.60	16.93	7.67
Manufacturing, Total	218.70	88.47	22.93	16.20	6.73
Food products	4.55	1.16	0.26	0.24	0.02
Textile products	5.32	3.85	1.41	1.17	0.24
Paper and Pulp	2.25	0.46	0.12	x	x
Chemicals	22.30	6.34	1.01	0.97	0.04
Petroleum and Coal	0.04	0.03	0.01	0.01	-
Iron and Steel	16.40	3.26	2.27	0.15	2.12
Nonferrous metal	4.89	2.81	0.45	0.32	0.13
General machinery	7.17	2.74	0.83	0.57	0.26
Electric machinery	68.78	44.28	10.35	7.06	3.29
Transport equipment	59.89	11.20	2.80	x	x
Precise instruments	3.48	2.31	0.98	0.49	0.49
Miscellaneous manufacturing products	23.63	10.04	2.16	2.03	0.13
Non-manufacturing, total	86.33	10.09	1.67	0.73	0.94
Agriculture, forestry, and fishery	0.84	0.13	0.08	x	x
Mining	2.21	0.03	-	-	-
Construction	3.10	0.11	0.00	x	x
Wholesale and retail trade	22.97	3.61	0.92	0.27	0.65
Services	31.27	2.11	0.25	0.23	0.02
Other	25.95	4.10	0.42	0.15	0.27
Sales 100 Million US dollars	Total	Asia	China	Main Land	Hong Kong
Total	11,971.60	3,375.43	986.35	335.51	650.85
Manufacturing, Total	5,216.68	1,846.37	471.25	264.79	206.46
Food products	132.60	36.79	10.26	7.83	2.44
Textile products	109.13	80.95	32.29	15.43	16.86
Paper and Pulp	51.37	8.59	1.95	x	x
Chemicals	464.81	153.53	18.01	13.00	5.01
Petroleum and Coal	17.53	12.32	0.26	0.26	-
Iron and Steel	188.81	56.23	10.62	9.55	1.07
Nonferrous metal	82.92	41.15	9.71	6.67	3.04
General machinery	316.01	91.90	43.16	22.38	20.78
Electric machinery	1,819.22	874.34	243.87	110.50	133.36
Transport equipment	1,542.04	324.44	46.93	x	x
Precise instruments	11.47	53.53	27.00	10.97	16.04
Miscellaneous manufacturing products	377.78	112.59	27.20	19.45	7.74
Non-manufacturing, total	6,754.92	1,529.05	515.10	70.72	444.38
Agriculture, forestry, and fishery	11.60	3.75	x	x	x
Mining	130.14	61.92	x	x	x
Construction	64.99	23.51	1.97	0.54	1.43
Wholesale and retail trade	5,556.28	1,323.50	485.44	60.68	424.76
Services	692.41	63.23	12.71	4.70	8.01
Other	299.50	53.14	12.91	3.34	9.56

Data Source: The 31st Basic Survey of Overseas Business Activities, METI, Japan

Figure 1 Aichi-Rest of Japan Interregional Input Output Table

Japan		Intermediate Demand		Final Demand		Export	Total Output
		Aichi	Rest of Japan	Aichi	Rest of Japan		
Intermediate Input	Aichi						
	Rest of Japan						
	Import	A					
	Value Added						
	Total Input						

Figure 2 3-Region Interregional Input Output Table

China		Intermediate Demand			Final Demand			Export	Total Output
		Central Coast	Other Coast	Rest of China	Central Coast	Other Coast	Rest of China		
Intermediate Input	Central Coast								
	Other Coast								
	Rest of China								
	Import	B							
	Value Added								
	Total Input								

Figure 3 Regional Breakdown of Imported Intermediate Input

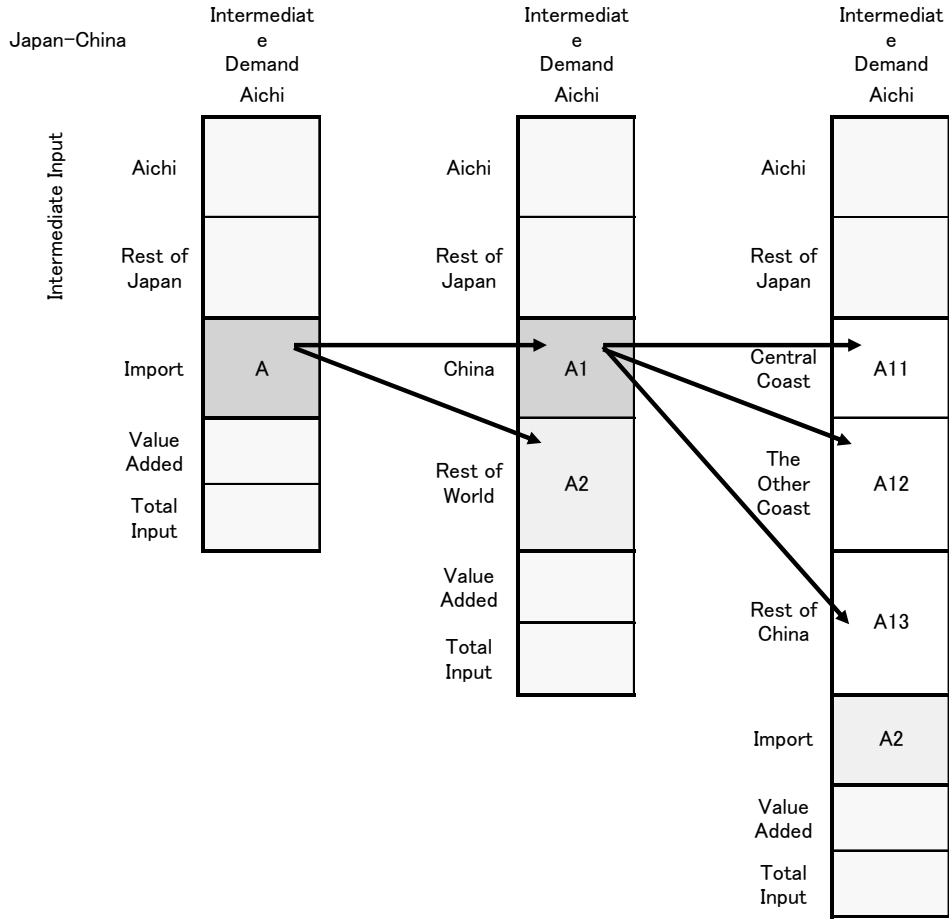


Figure 4 Japan-China Interregional Input Output Table

Japan-China		Intermediate Demand					Final Demand					Export	Output	
		Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China	Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China			
Intermediate Input	Aichi			B11										
	Rest of Japan			B12										
	Central Coast	A11												
	Other Coast	A12												
	Rest of China	A13												
	Import	A2		B2										
	Value Added													
Total Input														

Table 4 Sector Classification

Sector		China I-O Table (30 Sectors)	Japan I-O Table (104 Sectors)	Asia I-O Table (76 Sectors)
1	Agriculture, fishery, and forestry	1	001 002 003 004 005	001 002 003 004 005 006 007
2	Crude petroleum and natural gas products	3	009	008
3	Metal ore mining	4	006	009 010
4	Coal mining and processing and others	2 5	007 008	011
5	Food products and tobacco	6	010 011 012 013	012 013 014 015 016 017
6	Textile products	7	014	018 019 020
7	Wearing apparel, leather and furs	8	015	021 022 023
8	Sawmills and furniture	9	016 017	024 025 026
9	Paper and pulp	10	018 019 020	027 028
10	Petroleum processing and coking	11	029 030	034
11	Chemicals	12	021 022 023 024 025 026 027 028	029 030 031 032 033
12	Nonmetal mineral products	13	034 035 036 037	038 039 040
13	Primary metals	14	038 039 040 041 042 043	041 042
14	Metal products	15	045	043
15	General Machinery	16	046 047 048 049	044 045 046 047
16	Electric machinery	18	050 056 057	048 053 054
17	Information and communication equipment	19	051 052 053 054 055	049 050 051 052
18	Transport equipment	17 21	058 059 060 061	055 056 057 058
19	Precision instruments	20	062	059
20	Other manufacturing products	22 23	031 032 033 063 064 103	035 036 037 060
21	Electricity, steam and hot water, and Gas	24 25	069 070	061
22	Water production and supply	26	071 072	062
23	Construction	27	065 066 067 068	063 064
24	Wholesale and retail trade	29	073	066
25	Transport and warehousing	28	078 079 080 081 082 083 084 085	065
26	Services	30	074 075 076 077 086 087 088 089	067 068 069 070 071 072 073 074
			090 091 092 093 094 095 096 097	076 075
			098 099 100 101 102 104	

Table 5 Definition of Regions in China

		Central Coast	Other Coast	Rest of China	East	Central	West
Northeast	Heilongjiang			■		■	
	Jilin			■		■	
	Liaoning			■	■		
North Municipalities	Beijing		■		■		
	Tianjin		■		■		
North coast	Hebei		■		■		
	Shandong		■		■		
Central coast	Jiangsu	■			■		
	Shanghai	■			■		
	Zhejiang	■			■		
South coast	Fujian		■		■		
	Guangdong		■		■		
	Hainan		■		■		
Central	Shanxi			■		■	
	Henan			■		■	
	Anhui			■		■	
	Hubei			■		■	
	Hunan			■		■	
	Jiangxi			■		■	
Northwest	Inner Mongolia			■		■	
	Shaanxi			■			■
	Ningxia			■			■
	Gansu			■			■
	Qinghai			■			■
	Xinjiang			■			■
Southwest	Sichuan			■			■
	Chongqing			■			■
	Yunnan			■			■
	Guizhou			■			■
	Guangxi			■	■		■
	Tibet			■			■

Taiwan, Hong Kong, and Macau are excluded.

Table 6 Japan-China Interregional Input Output Table (5 Regions - 1 Sector)

Unit: 100 million US dollar	Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China	Intermediat e Demand, Total	Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China	Export	Statistical Discrepanc y	Total Output
Aichi	234871	93659	454	768	227	329979	216248	66316	180	293	117	71245	0	684378
Rest of Japan	100713	3332415	4921	9508	1645	3449202	53004	4266881	1364	2535	691	439472	0	8213149
Central Coast	760	5581	294212	23487	21848	345887	456	6037	140986	6047	10305	44525	4481	558726
Other Coast	1407	12533	32319	400210	41374	487843	957	12906	5541	234334	19847	86048	-30035	817441
Rest of China	459	3840	31807	40512	558703	635321	190	2804	4510	8528	412935	20965	-47375	1037878
Rest of World	21711	269295	28640	61526	12068	393241	7188	156438	8216	16948	4994	0	0	587026
Intermediate Input, Total	359921	3717323	392353	536011	635865	5641472	278043	4511382	160798	268686	448889	662255	-72929	11898597
Value Added	324457	4495826	166373	281430	402013	5670099								
Total Input	684378	8213149	558726	817441	1037878	11311571								

	Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China	Intermediat e Demand, Total	Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China	Export	Statistical Discrepanc y	Total Output
Aichi	0.3432	0.0114	0.0008	0.0009	0.0002	0.0292	0.778	0.015	0.001	0.001	0.000	0.108	0.000	0.058
Rest of Japan	0.1472	0.4057	0.0088	0.0116	0.0016	0.3049	0.191	0.946	0.008	0.009	0.002	0.664	0.000	0.690
Central Coast	0.0011	0.0007	0.5266	0.0287	0.0211	0.0306	0.002	0.001	0.877	0.023	0.023	0.067	-0.061	0.047
Other Coast	0.0021	0.0015	0.0578	0.4896	0.0399	0.0431	0.003	0.003	0.034	0.872	0.044	0.130	0.412	0.069
Rest of China	0.0007	0.0005	0.0569	0.0496	0.5383	0.0562	0.001	0.001	0.028	0.032	0.920	0.032	0.650	0.087
Rest of World	0.0317	0.0328	0.0513	0.0753	0.0116	0.0348	0.026	0.035	0.051	0.063	0.011	0.000	0.000	0.049
Intermediate Input, Total	0.5259	0.4526	0.7022	0.6557	0.6127	0.4987	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Value Added	0.4741	0.5474	0.2978	0.3443	0.3873	0.5013								
Total Input	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000								

Figure 5 Regional Output

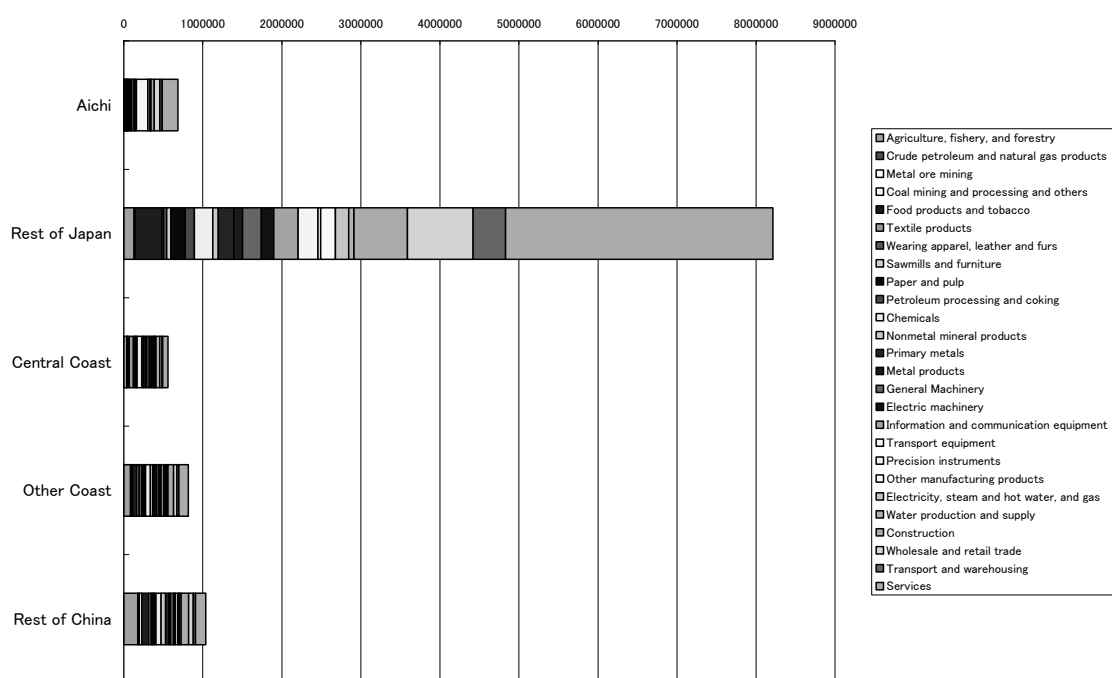


Figure 6 Comparison of Industrial Structure, Aichi and Two Coast Regions

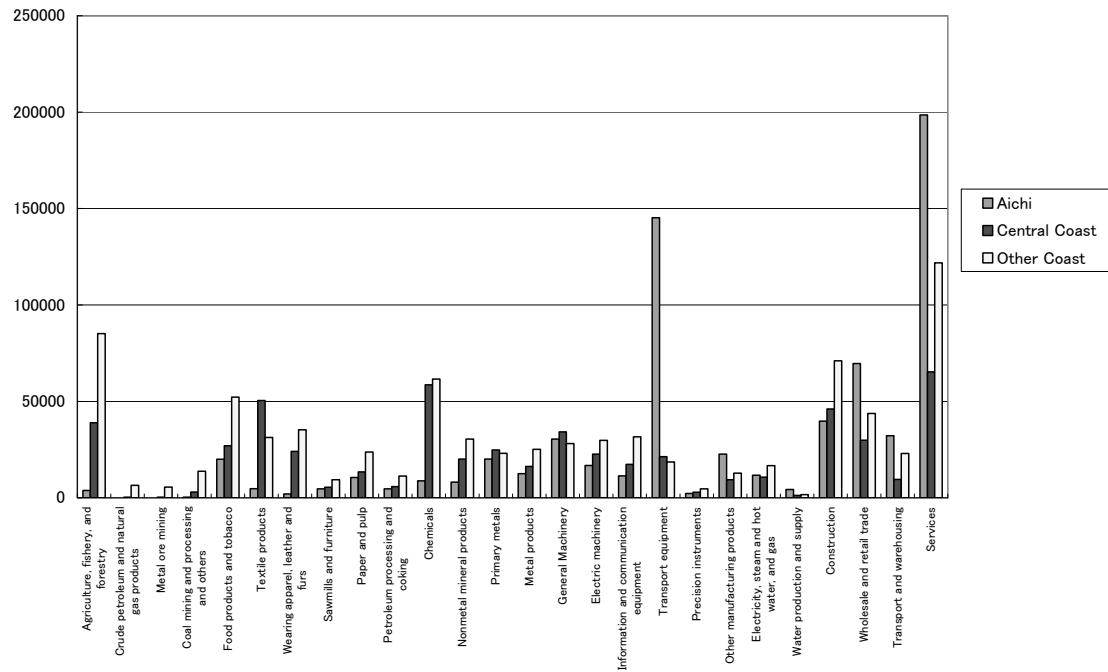


Table 7 Comparative Advantage of Each Region

	Aichi	Rest of Japan	Central Coast	Other Coast	Rest of China
1 Agriculture, fishery, and forestry	0.370	1.053	0.564	0.844	1.358
2 Crude petroleum and natural gas products	0.000	1.083	0.063	0.972	1.527
3 Metal ore mining	0.000	1.083	0.074	1.125	1.400
4 Coal mining and processing and others	0.293	1.059	0.268	0.841	1.520
5 Food products and tobacco	0.717	1.024	0.697	0.925	1.222
6 Textile products	2.320	0.890	1.945	0.825	0.629
7 Wearing apparel, leather and furs	0.630	1.031	1.412	1.415	0.452
8 Sawmills and furniture	1.063	0.995	0.862	1.024	1.056
9 Paper and pulp	0.710	1.024	1.088	1.312	0.707
10 Petroleum processing and coking	0.502	1.041	0.666	0.888	1.268
11 Chemicals	0.473	1.044	1.379	0.990	0.804
12 Nonmetal mineral products	1.368	0.969	0.815	0.844	1.222
13 Primary metals	1.204	0.983	1.141	0.724	1.141
14 Metal products	1.301	0.975	1.168	1.233	0.726
15 General Machinery	1.488	0.959	1.488	0.836	0.867
16 Electric machinery	1.239	0.980	1.461	1.306	0.510
17 Information and telecommunication equipment	0.460	1.045	1.269	1.578	0.400
18 Transport equipment	4.766	0.686	1.265	0.753	1.052
19 Precision instruments	0.810	1.016	1.272	1.374	0.559
20 Other manufacturing products	1.413	0.966	1.177	1.104	0.823
21 Electricity, steam and hot water, and gas	0.851	1.012	0.942	1.007	1.025
22 Water production and supply	0.770	1.019	1.167	1.024	0.891
23 Construction	0.720	1.023	0.947	0.999	1.030
24 Wholesale and retail trade	1.006	0.999	0.965	0.966	1.045
25 Transport and warehousing	0.939	1.005	0.671	1.107	1.093
26 Services	0.721	1.023	0.887	1.131	0.957

Figure 7a Regional Structure of Sectoral Demand, Aichi

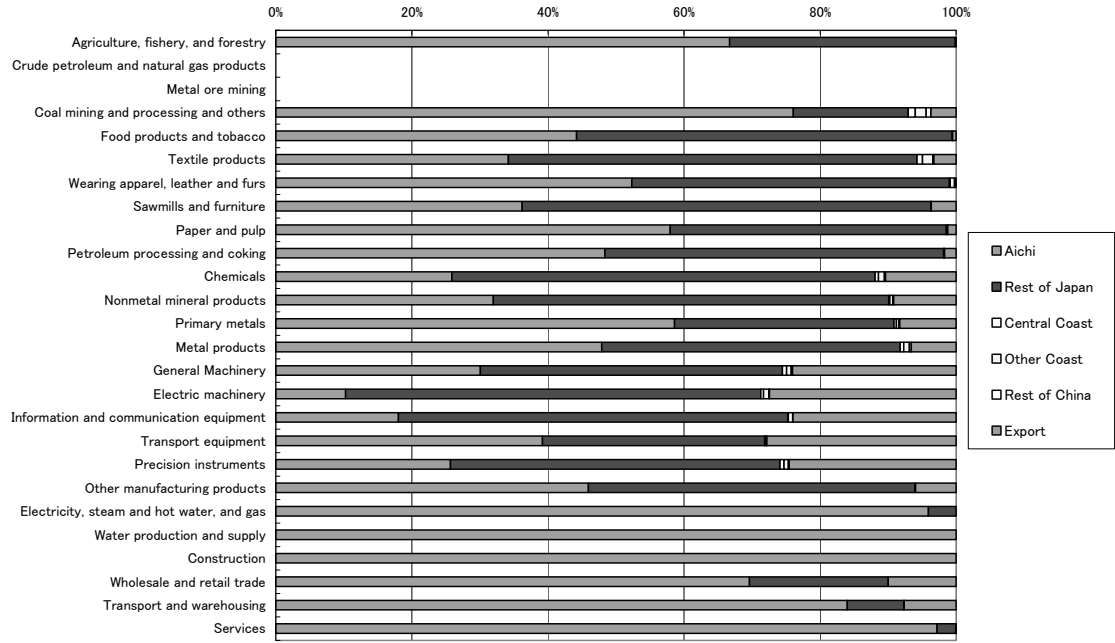


Figure 7b Regional Structure of Sectoral Demand, Central Coast

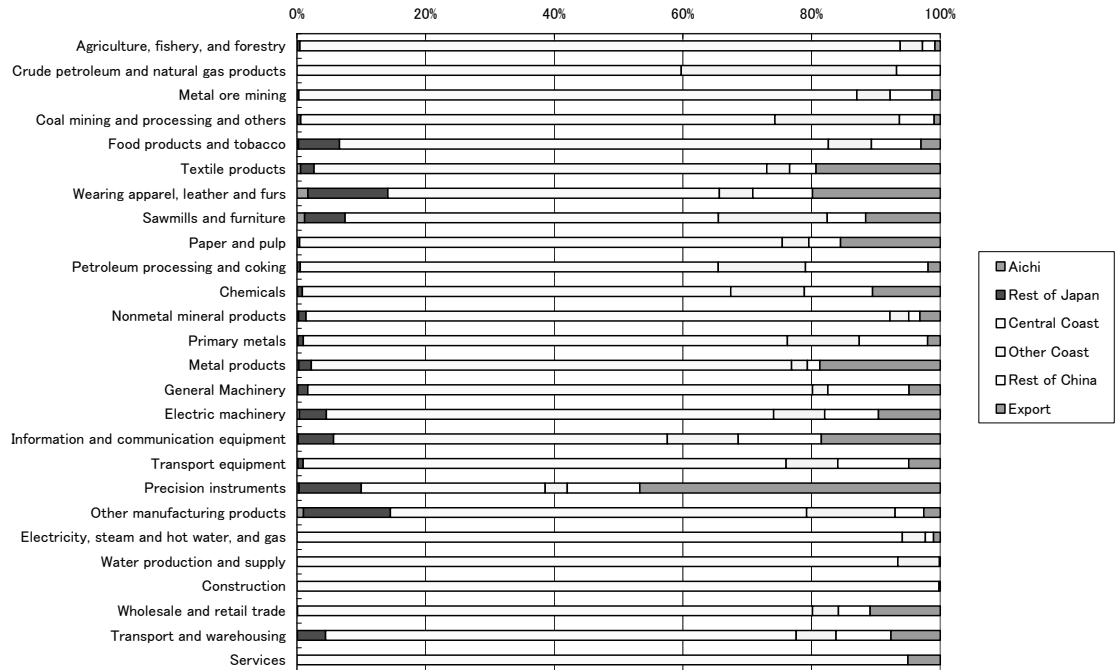


Figure 7c Regional Structure of Sectoral Demand, The Other Coast

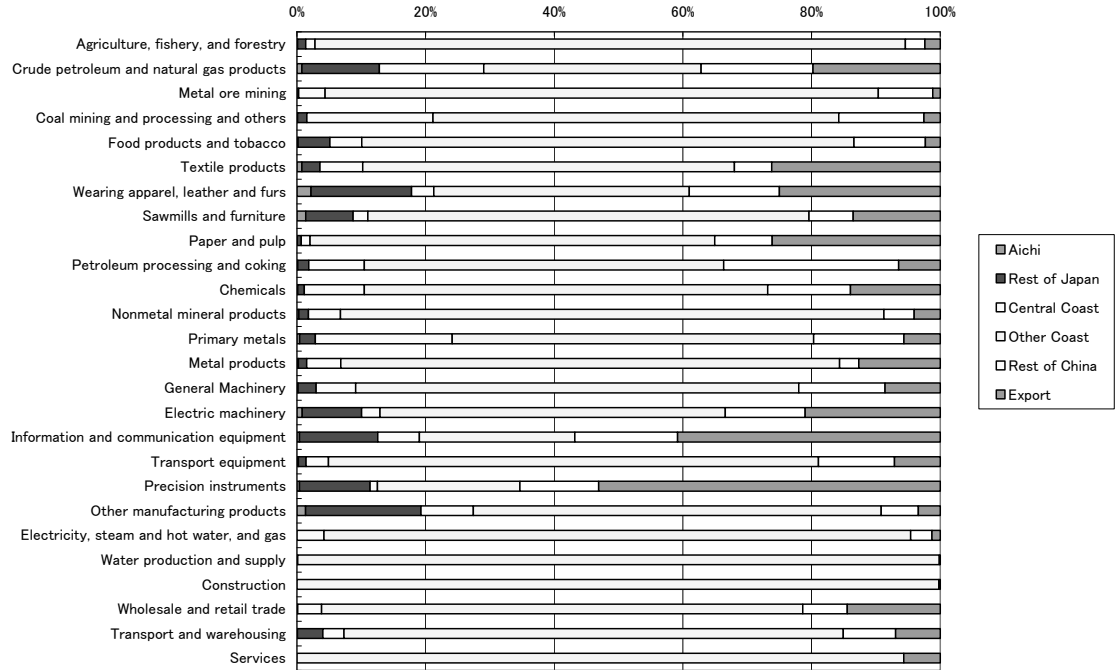


Figure 8 International Trades between Aichi and Each Chinese Region

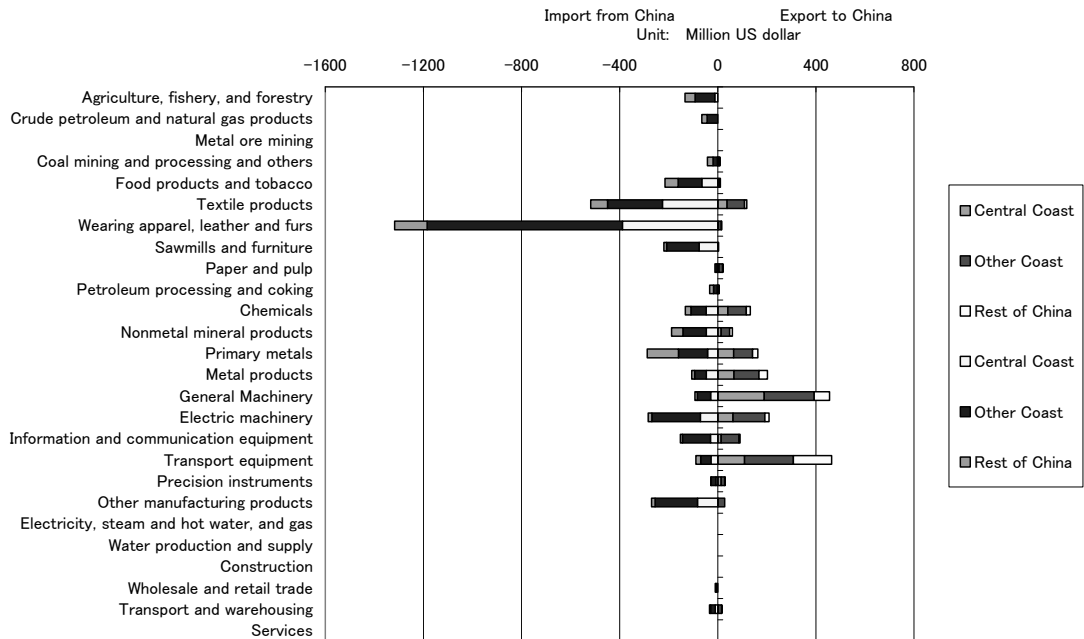


Figure 9 Regional Induced Effects of Each Sectoral Final Demand in Aichi

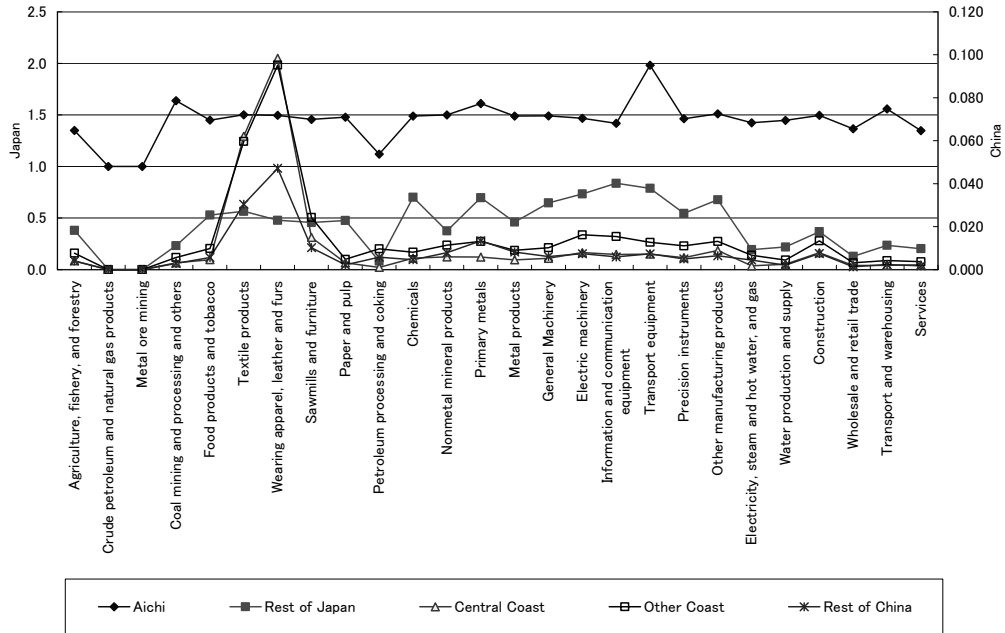


Figure 10a Effects Induced on Chinese Regions by Each Sectoral Final Demand in Aichi

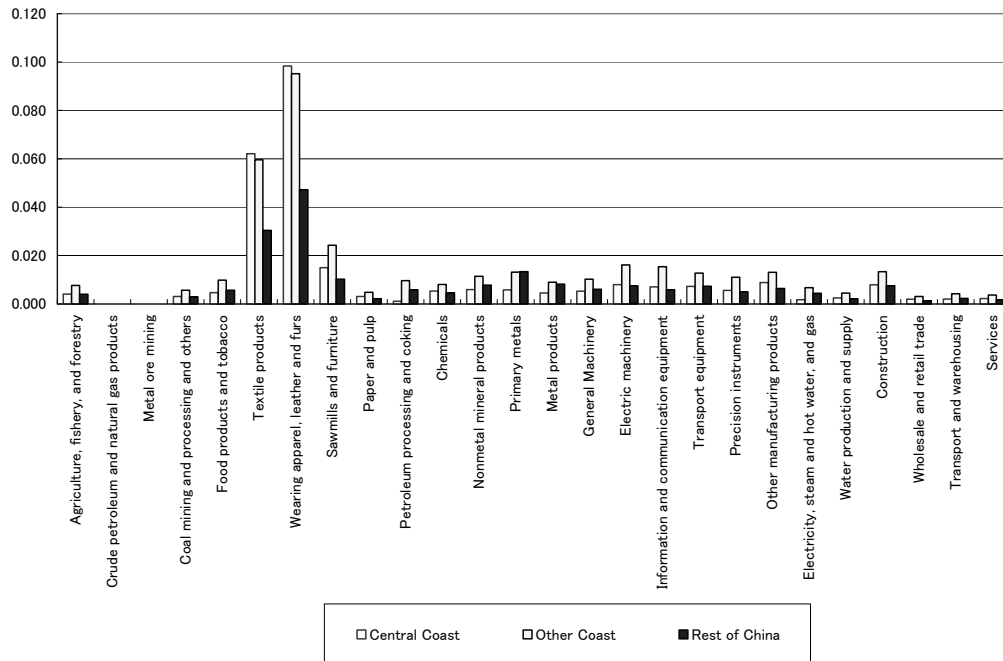


Figure 10b Effects Induced on Aichi by Each Sectoral Final Demand in Chinese Regions

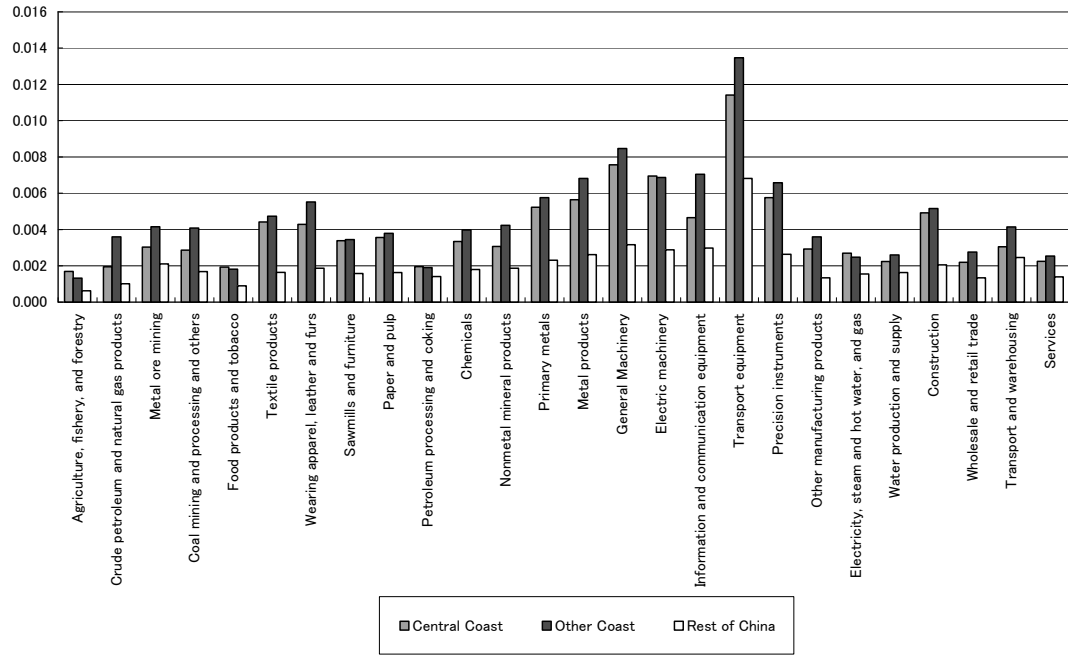


Table 8 Regional Contribution to One Unit Increase in Each Final Demand, Measured
by Induced Import and Value Added

		Import	Aichi	Rest Of Japan	Central Coast	The Other Coast	Rest of China	Total	
Aichi	1	Agriculture, fishery, and forestry	0.069	0.744	0.181	0.001	0.003	0.002	1.000
	2	Crude petroleum and natural gas products	1.000	0.000	0.000	0.000	0.000	0.000	1.000
	3	Metal ore mining	1.000	0.000	0.000	0.000	0.000	0.000	1.000
	4	Coal mining and processing and others	0.062	0.822	0.112	0.001	0.002	0.001	1.000
	5	Food products and tobacco	0.085	0.648	0.259	0.001	0.004	0.002	1.000
	6	Textile products	0.105	0.603	0.246	0.016	0.019	0.011	1.000
	7	Wearing apparel, leather and furs	0.099	0.621	0.209	0.025	0.030	0.016	1.000
	8	Sawmills and furniture	0.151	0.624	0.209	0.004	0.008	0.004	1.000
	9	Paper and pulp	0.049	0.724	0.224	0.001	0.002	0.001	1.000
	10	Petroleum processing and coking	0.478	0.476	0.038	0.000	0.005	0.003	1.000
	11	Chemicals	0.113	0.581	0.301	0.002	0.003	0.002	1.000
	12	Nonmetal mineral products	0.086	0.729	0.177	0.002	0.004	0.003	1.000
	13	Primary metals	0.148	0.569	0.273	0.002	0.004	0.004	1.000
	14	Metal products	0.086	0.719	0.188	0.001	0.003	0.003	1.000
	15	General Machinery	0.082	0.634	0.277	0.001	0.003	0.002	1.000
	16	Electric machinery	0.103	0.579	0.309	0.002	0.005	0.002	1.000
	17	Information and communication equipment	0.115	0.525	0.352	0.002	0.004	0.002	1.000
	18	Transport equipment	0.108	0.581	0.303	0.002	0.004	0.002	1.000
	19	Precision instruments	0.083	0.669	0.242	0.002	0.003	0.002	1.000
	20	Other manufacturing products	0.109	0.593	0.289	0.003	0.004	0.002	1.000
	21	Electricity, steam and hot water, and gas	0.210	0.690	0.095	0.001	0.003	0.002	1.000
	22	Water production and supply	0.050	0.844	0.103	0.001	0.002	0.001	1.000
	23	Construction	0.080	0.742	0.169	0.002	0.004	0.003	1.000
	24	Wholesale and retail trade	0.021	0.911	0.065	0.001	0.001	0.000	1.000
	25	Transport and warehousing	0.081	0.801	0.114	0.001	0.001	0.001	1.000
	26	Services	0.030	0.872	0.096	0.001	0.001	0.001	1.000
Rest of Japan	1	Agriculture, fishery, and forestry	0.064	0.010	0.921	0.001	0.002	0.002	1.000
	2	Crude petroleum and natural gas products	0.029	0.004	0.966	0.000	0.001	0.000	1.000
	3	Metal ore mining	0.059	0.006	0.933	0.000	0.001	0.001	1.000
	4	Coal mining and processing and others	0.068	0.008	0.921	0.001	0.001	0.001	1.000
	5	Food products and tobacco	0.081	0.013	0.899	0.001	0.004	0.002	1.000
	6	Textile products	0.085	0.029	0.864	0.008	0.010	0.005	1.000
	7	Wearing apparel, leather and furs	0.071	0.034	0.864	0.010	0.013	0.007	1.000
	8	Sawmills and furniture	0.090	0.017	0.886	0.002	0.004	0.002	1.000
	9	Paper and pulp	0.055	0.013	0.929	0.001	0.002	0.001	1.000
	10	Petroleum processing and coking	0.453	0.002	0.537	0.000	0.005	0.003	1.000
	11	Chemicals	0.108	0.014	0.873	0.001	0.002	0.001	1.000
	12	Nonmetal mineral products	0.084	0.013	0.897	0.001	0.003	0.002	1.000
	13	Primary metals	0.168	0.020	0.804	0.001	0.003	0.003	1.000
	14	Metal products	0.083	0.015	0.896	0.001	0.002	0.002	1.000
	15	General Machinery	0.092	0.024	0.877	0.001	0.003	0.002	1.000
	16	Electric machinery	0.108	0.022	0.862	0.002	0.005	0.002	1.000
	17	Information and communication equipment	0.138	0.016	0.837	0.002	0.004	0.002	1.000
	18	Transport equipment	0.123	0.088	0.781	0.002	0.004	0.002	1.000
	19	Precision instruments	0.102	0.016	0.875	0.002	0.004	0.002	1.000
	20	Other manufacturing products	0.112	0.020	0.860	0.002	0.004	0.002	1.000
	21	Electricity, steam and hot water, and gas	0.130	0.004	0.862	0.000	0.002	0.001	1.000
	22	Water production and supply	0.036	0.005	0.957	0.000	0.001	0.000	1.000
	23	Construction	0.065	0.016	0.913	0.001	0.003	0.002	1.000
	24	Wholesale and retail trade	0.022	0.004	0.973	0.000	0.001	0.000	1.000
	25	Transport and warehousing	0.084	0.008	0.906	0.000	0.001	0.001	1.000
	26	Services	0.029	0.006	0.963	0.000	0.001	0.001	1.000

Table 8 Regional Contribution to One Unit Increase in Each Final Demand, measured by Induced Import and Value Added (Continued)

			Import	Aichi	Rest Of Japan	Central Coast	The Other Coast	Rest of China	Total
Central Coast	1	Agriculture, fishery, and forestry	0.072	0.001	0.008	0.811	0.049	0.060	1.000
	2	Crude petroleum and natural gas products	0.048	0.001	0.007	0.883	0.026	0.034	1.000
	3	Metal ore mining	0.090	0.001	0.012	0.729	0.073	0.095	1.000
	4	Coal mining and processing and others	0.100	0.001	0.012	0.706	0.082	0.099	1.000
	5	Food products and tobacco	0.096	0.001	0.009	0.713	0.081	0.100	1.000
	6	Textile products	0.156	0.002	0.025	0.625	0.092	0.100	1.000
	7	Wearing apparel, leather and furs	0.152	0.002	0.024	0.629	0.099	0.095	1.000
	8	Sawmills and furniture	0.137	0.001	0.014	0.580	0.113	0.154	1.000
	9	Paper and pulp	0.151	0.001	0.018	0.645	0.085	0.099	1.000
	10	Petroleum processing and coking	0.213	0.001	0.008	0.370	0.152	0.256	1.000
	11	Chemicals	0.160	0.001	0.022	0.610	0.099	0.109	1.000
	12	Nonmetal mineral products	0.107	0.001	0.013	0.613	0.111	0.155	1.000
	13	Primary metals	0.162	0.002	0.021	0.465	0.138	0.212	1.000
	14	Metal products	0.156	0.002	0.022	0.542	0.115	0.162	1.000
	15	General Machinery	0.181	0.003	0.030	0.545	0.102	0.139	1.000
	16	Electric machinery	0.180	0.003	0.030	0.524	0.112	0.150	1.000
	17	Information and communication equipment	0.230	0.002	0.031	0.558	0.089	0.089	1.000
	18	Transport equipment	0.175	0.004	0.028	0.565	0.098	0.130	1.000
	19	Precision instruments	0.225	0.002	0.032	0.545	0.090	0.105	1.000
	20	Other manufacturing products	0.100	0.001	0.014	0.718	0.077	0.089	1.000
	21	Electricity, steam and hot water, and gas	0.087	0.001	0.011	0.588	0.123	0.191	1.000
	22	Water production and supply	0.077	0.001	0.010	0.738	0.076	0.097	1.000
	23	Construction	0.129	0.002	0.019	0.596	0.107	0.147	1.000
	24	Wholesale and retail trade	0.072	0.001	0.008	0.828	0.042	0.049	1.000
	25	Transport and warehousing	0.110	0.001	0.009	0.740	0.060	0.081	1.000
	26	Services	0.092	0.001	0.011	0.782	0.052	0.062	1.000
The Other Coast	27	Agriculture, fishery, and forestry	0.068	0.001	0.007	0.021	0.853	0.052	1.000
	28	Crude petroleum and natural gas products	0.103	0.001	0.014	0.021	0.804	0.057	1.000
	29	Metal ore mining	0.153	0.002	0.017	0.031	0.707	0.091	1.000
	30	Coal mining and processing and others	0.114	0.002	0.016	0.034	0.749	0.085	1.000
	31	Food products and tobacco	0.111	0.001	0.009	0.033	0.754	0.092	1.000
	32	Textile products	0.180	0.002	0.027	0.043	0.667	0.081	1.000
	33	Wearing apparel, leather and furs	0.208	0.002	0.032	0.053	0.622	0.083	1.000
	34	Sawmills and furniture	0.155	0.001	0.017	0.058	0.638	0.132	1.000
	35	Paper and pulp	0.189	0.002	0.022	0.049	0.644	0.094	1.000
	36	Petroleum processing and coking	0.282	0.001	0.008	0.023	0.535	0.150	1.000
	37	Chemicals	0.193	0.002	0.026	0.051	0.627	0.102	1.000
	38	Nonmetal mineral products	0.139	0.002	0.017	0.040	0.687	0.115	1.000
	39	Primary metals	0.177	0.002	0.023	0.042	0.616	0.140	1.000
	40	Metal products	0.185	0.003	0.026	0.050	0.590	0.146	1.000
	41	General Machinery	0.208	0.003	0.034	0.035	0.631	0.089	1.000
	42	Electric machinery	0.196	0.003	0.031	0.049	0.602	0.118	1.000
	43	Information and communication equipment	0.439	0.003	0.059	0.046	0.387	0.066	1.000
	44	Transport equipment	0.206	0.005	0.034	0.044	0.612	0.100	1.000
	45	Precision instruments	0.266	0.003	0.037	0.049	0.531	0.115	1.000
	46	Other manufacturing products	0.130	0.001	0.019	0.042	0.717	0.090	1.000
	47	Electricity, steam and hot water, and gas	0.106	0.001	0.010	0.024	0.735	0.123	1.000
	48	Water production and supply	0.087	0.001	0.011	0.027	0.802	0.071	1.000
	49	Construction	0.139	0.002	0.020	0.041	0.677	0.121	1.000
	50	Wholesale and retail trade	0.097	0.001	0.011	0.021	0.821	0.050	1.000
	51	Transport and warehousing	0.120	0.001	0.012	0.024	0.770	0.072	1.000
	52	Services	0.107	0.001	0.012	0.022	0.807	0.052	1.000
Rest of China	27	Agriculture, fishery, and forestry	0.025	0.000	0.003	0.017	0.034	0.921	1.000
	28	Crude petroleum and natural gas products	0.029	0.000	0.004	0.015	0.032	0.920	1.000
	29	Metal ore mining	0.067	0.001	0.007	0.033	0.069	0.823	1.000
	30	Coal mining and processing and others	0.044	0.001	0.005	0.027	0.057	0.866	1.000
	31	Food products and tobacco	0.035	0.000	0.004	0.025	0.055	0.881	1.000
	32	Textile products	0.056	0.001	0.008	0.045	0.072	0.818	1.000
	33	Wearing apparel, leather and furs	0.065	0.001	0.009	0.055	0.090	0.781	1.000
	34	Sawmills and furniture	0.051	0.001	0.006	0.035	0.070	0.837	1.000
	35	Paper and pulp	0.060	0.001	0.007	0.041	0.082	0.810	1.000
	36	Petroleum processing and coking	0.092	0.001	0.005	0.023	0.082	0.798	1.000
	37	Chemicals	0.069	0.001	0.008	0.045	0.082	0.795	1.000
	38	Nonmetal mineral products	0.056	0.001	0.006	0.034	0.075	0.829	1.000
	39	Primary metals	0.080	0.001	0.008	0.040	0.090	0.783	1.000
	40	Metal products	0.075	0.001	0.009	0.044	0.089	0.782	1.000
	41	General Machinery	0.079	0.001	0.011	0.047	0.090	0.772	1.000
	42	Electric machinery	0.083	0.001	0.012	0.052	0.100	0.752	1.000
	43	Information and communication equipment	0.144	0.001	0.019	0.062	0.109	0.664	1.000
	44	Transport equipment	0.088	0.002	0.012	0.051	0.089	0.758	1.000
	45	Precision instruments	0.086	0.001	0.011	0.046	0.087	0.768	1.000
	46	Other manufacturing products	0.042	0.001	0.005	0.029	0.056	0.868	1.000
	47	Electricity, steam and hot water, and gas	0.041	0.001	0.005	0.024	0.058	0.871	1.000
	48	Water production and supply	0.042	0.001	0.005	0.026	0.054	0.872	1.000
	49	Construction	0.057	0.001	0.007	0.034	0.076	0.826	1.000
	50	Wholesale and retail trade	0.036	0.000	0.004	0.022	0.044	0.893	1.000
	51	Transport and warehousing	0.053	0.001	0.005	0.026	0.059	0.855	1.000
	52	Services	0.042	0.001	0.005	0.025	0.051	0.877	1.000

Figure 11a Output Induced in Central Coast by Final Demand of Aichi

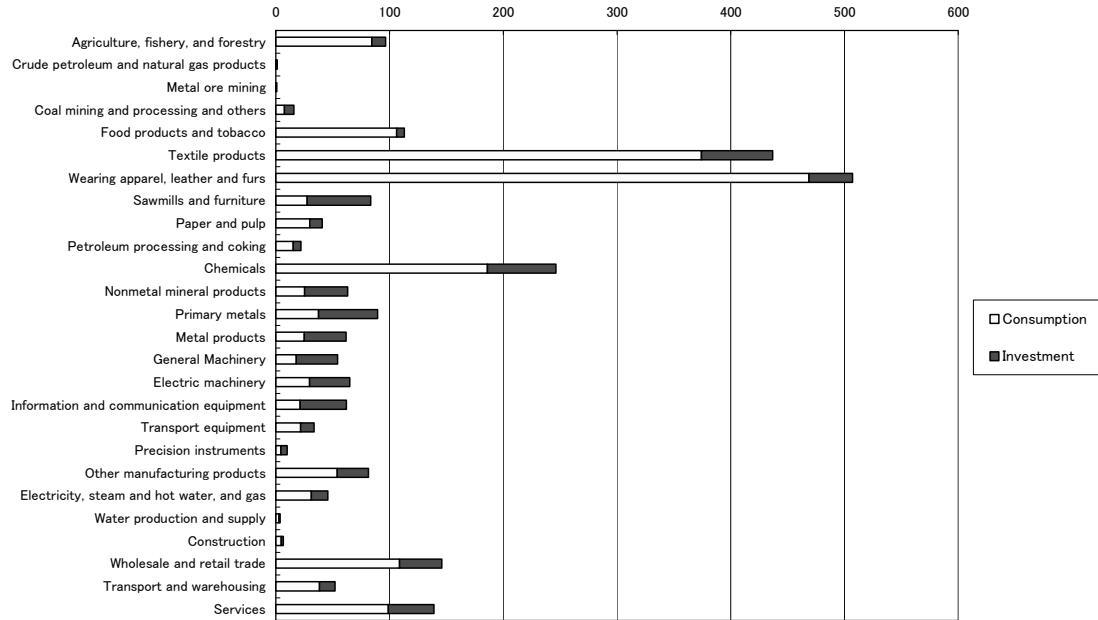


Figure 11b Output Induced in Other Coast by Final Demand of Aichi

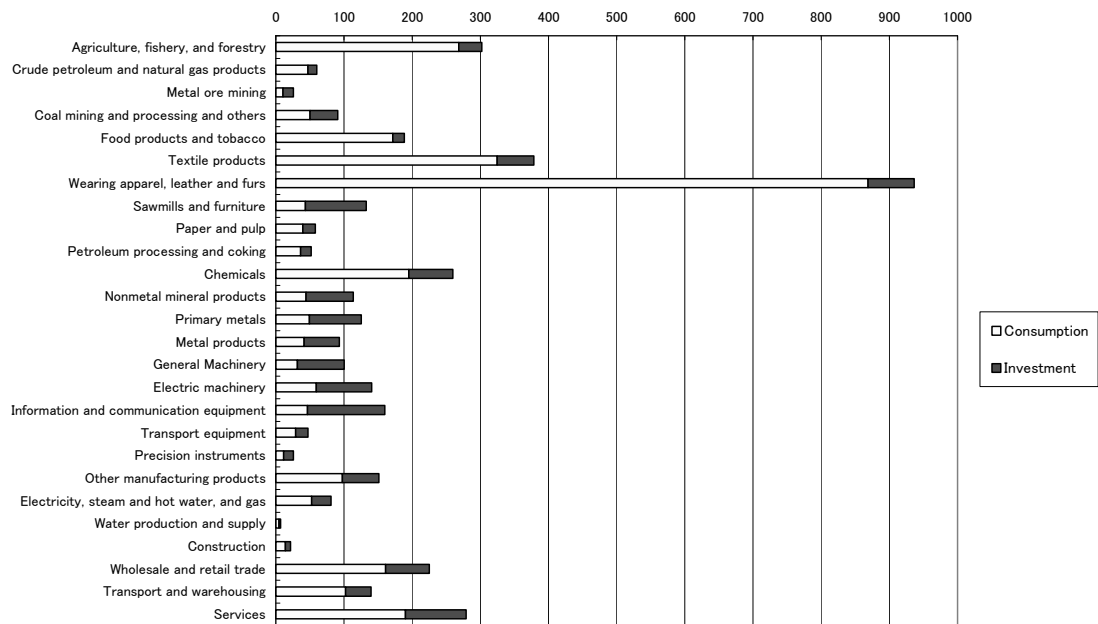


Figure 12a Output Induced in Aichi by Final Demand of Central Coast

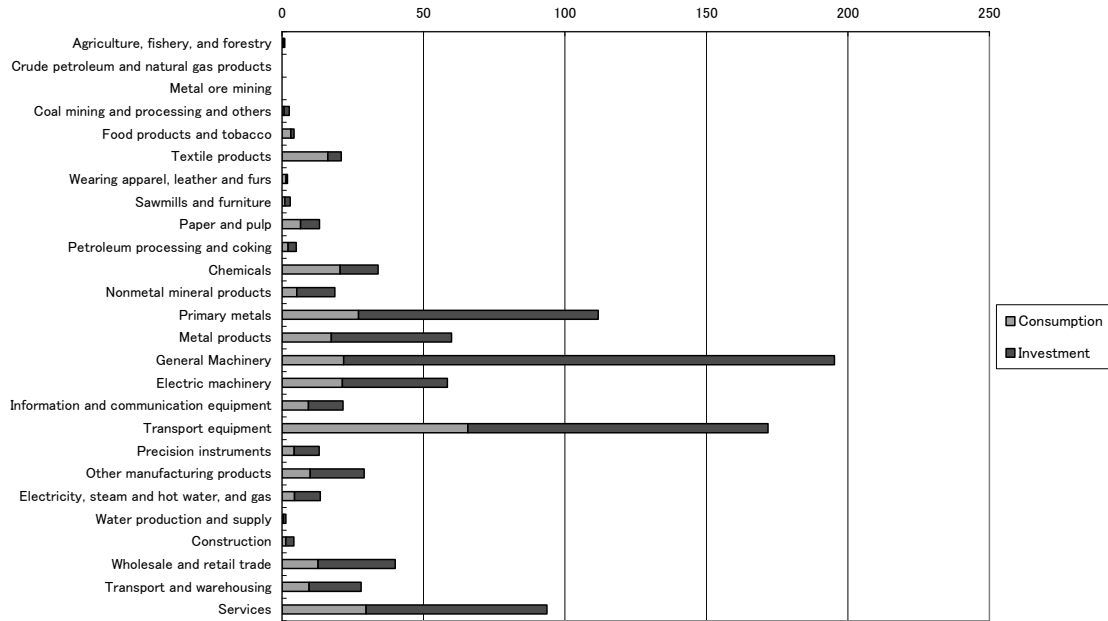


Figure 12b Output Induced in Aichi by Final Demand of the Other Coast

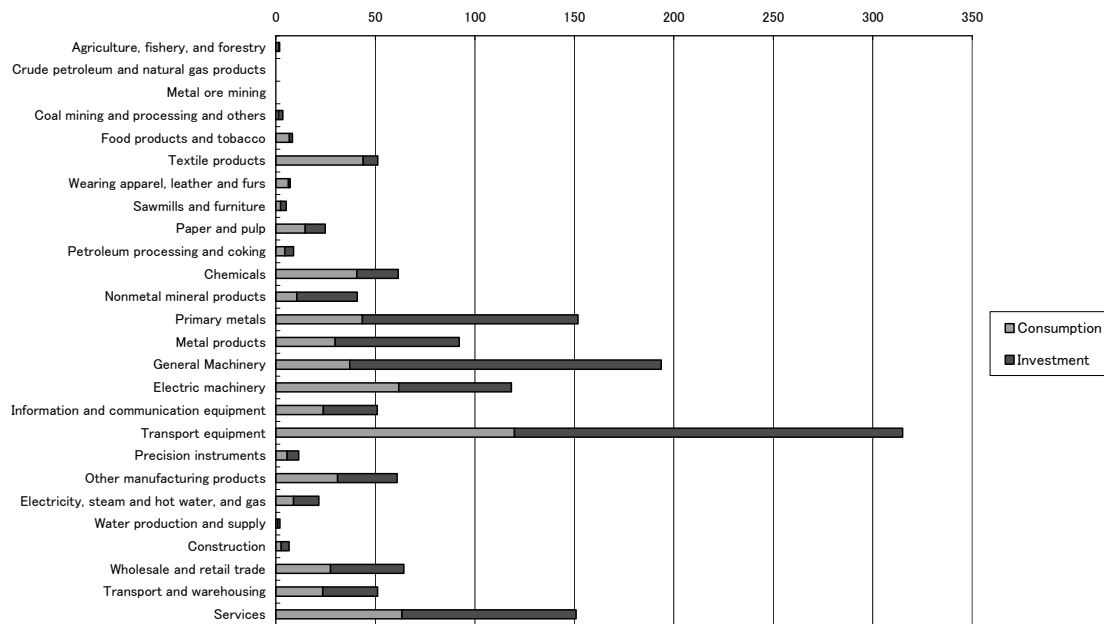


Figure 13a Output Induced in Chinese Regions by Export Demand of Aichi

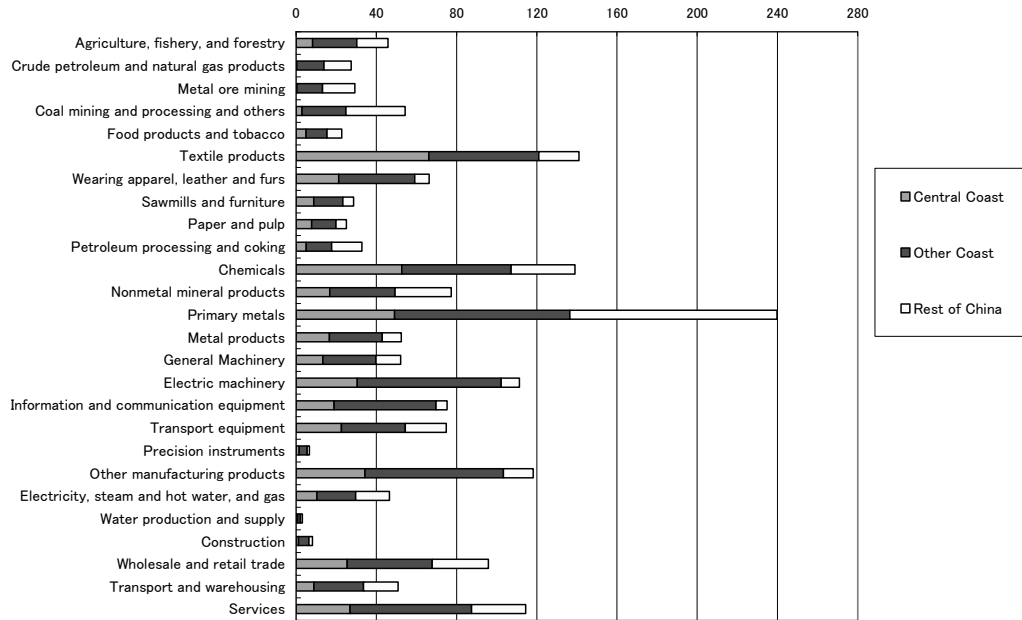


Figure 13b Output Induced in Aichi by Export Demand of China

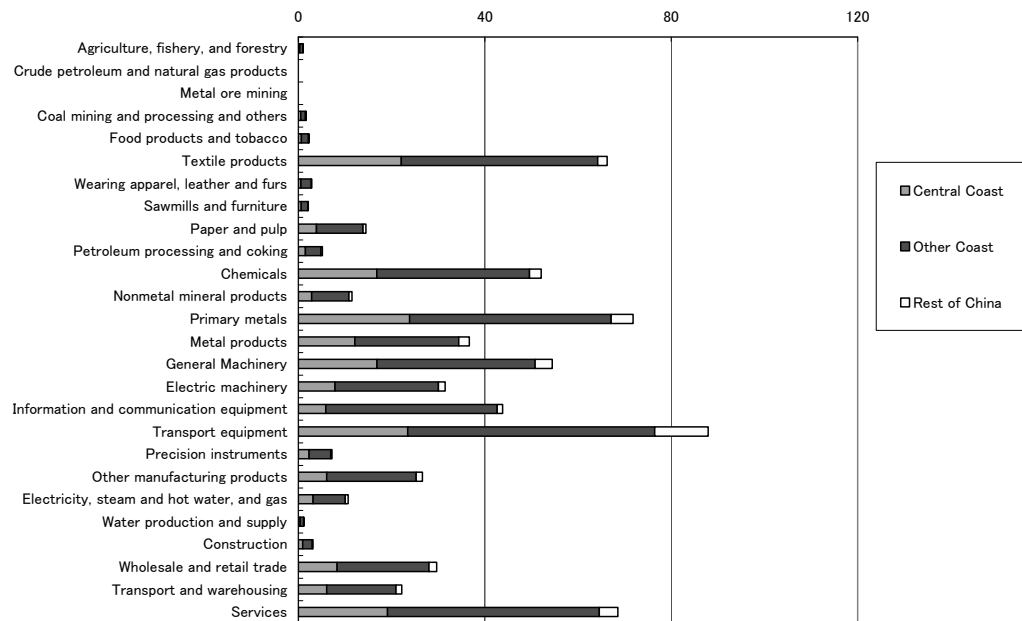


Table 9a Regional Sales Structure of Japanese Overseas Subsidiaries in China

China, 2000	Sales	Export to Japan	Sales in China	Export to the Third Countries				
				North America	Asia	Europe	Others	
Total	100.0	30.1	43.8	26.1	3.6	21.6	1.0	0.0
Manufacturing, Total	100.0	31.5	47.2	21.3	5.1	14.8	1.4	0.0
Food products	100.0	13.3	84.3	2.4	0.7	1.7	0.0	0.0
Textile products	100.0	46.8	41.1	12.2	3.4	7.9	0.9	0.0
Paper and Pulp	100.0	1.3	96.8	1.9	1.3	0.6	0.0	0.0
Chemicals	100.0	11.3	78.1	10.6	0.8	9.3	0.6	0.0
Petroleum and Coal	100.0	10.6	80.1	9.3	0.0	0.0	0.0	9.3
Iron and Steel	100.0	3.2	83.0	13.8	0.3	13.4	0.1	0.0
Nonferrous metal	100.0	11.2	75.8	13.0	3.0	5.9	4.1	0.0
General machinery	100.0	53.5	25.8	20.7	0.2	20.3	0.2	0.0
Electric machinery	100.0	31.9	38.3	29.8	6.7	21.5	1.6	0.0
Transport equipment	100.0	9.1	84.8	6.0	5.6	0.4	0.1	0.0
Precision instruments	100.0	60.7	30.3	9.0	3.6	2.7	2.7	0.0
Miscellaneous manufacturing products	100.0	25.5	57.4	17.1	9.2	4.2	3.6	0.0
China, 2001	Sales	Export to Japan	Sales in China	Export to the Third Countries				
					North America	Asia	Europe	Others
Total	100.0	30.0	43.5	26.5	3.6	19.4	1.6	1.8
Manufacturing, Total	100.0	34.7	46.4	18.9	4.8	11.6	1.5	0.9
Food products	100.0	17.1	81.6	1.3	0.3	0.8	0.1	0.0
Textile products	100.0	58.3	32.3	9.4	3.0	6.0	0.2	0.2
Paper and Pulp	100.0	6.6	92.0	1.4	1.4	0.0	0.0	0.0
Chemicals	100.0	12.2	71.7	16.1	0.3	15.2	0.6	0.1
Petroleum and Coal	100.0	0.0	86.2	13.8	0.0	3.6	9.6	0.6
Iron and Steel	100.0	2.2	91.2	6.6	0.0	6.6	0.0	0.0
Nonferrous metal	100.0	7.6	83.0	9.4	1.0	6.1	0.0	2.3
General machinery	100.0	56.9	24.5	18.6	2.2	15.0	1.2	0.2
Electric machinery	100.0	26.2	35.5	38.3	20.9	13.4	3.4	0.7
Information and communication equipment	100.0	39.6	36.5	23.9	2.4	17.4	2.1	2.1
Transport equipment	100.0	14.2	82.2	3.6	1.9	1.4	0.1	0.1
Precision instruments	100.0	52.2	39.5	8.2	1.7	5.7	0.7	0.0
Miscellaneous manufacturing products	100.0	30.5	51.4	18.1	8.6	6.9	2.4	0.1

Table 9b Regional Purchases Structure of Japanese Overseas Subsidiaries in China

China, 2000	Input Purchases	Import from Japan	Purchases in China	Import from the Third Countries				
				North America	Asia	Europe	Others	
Total	100.0	34.8	35.8	29.4	0.8	19.2	2.0	7.4
Manufacturing, Total	100.0	35.1	40.1	24.8	0.4	17.7	0.3	6.5
Food products	100.0	1.0	79.9	19.2	0.0	6.8	0.0	12.3
Textile products	100.0	40.7	39.4	19.9	0.3	14.8	0.4	4.4
Paper and Pulp	100.0	11.0	84.8	4.3	2.9	0.0	1.3	0.0
Chemicals	100.0	36.1	51.0	12.9	1.1	10.7	0.8	0.4
Petroleum and Coal	100.0	10.6	61.2	28.1	0.0	28.1	0.0	0.0
Iron and Steel	100.0	59.7	30.6	9.6	0.0	7.4	0.0	2.2
Nonferrous metal	100.0	17.3	75.9	6.8	0.1	5.7	0.1	0.8
General machinery	100.0	36.3	54.6	9.1	0.2	8.3	0.0	0.6
Electric machinery	100.0	32.2	31.3	36.5	0.3	25.8	0.1	10.3
Transport equipment	100.0	50.9	45.3	3.9	2.1	1.6	0.2	0.0
Precision instruments	100.0	46.0	51.9	2.1	0.1	2.0	0.0	0.0
Miscellaneous manufacturing products	100.0	28.8	56.1	15.1	1.3	10.6	3.0	0.2
China, 2001	Input Purchases	Import from Japan	Purchases in China	Import from the Third Countries				
					North America	Asia	Europe	Others
Total	100.0	36.6	36.1	27.3	1.5	23.4	0.7	1.6
Manufacturing, Total	100.0	37.6	43.2	19.2	1.7	16.9	0.4	0.0
Food products	100.0	9.7	76.7	13.6	5.4	3.0	0.0	0.0
Textile products	100.0	41.3	53.0	5.7	0.4	5.0	0.1	0.0
Paper and Pulp	100.0	12.0	87.9	0.1	0.1	0.0	0.0	0.0
Chemicals	100.0	32.2	34.6	33.2	17.9	14.1	1.1	0.0
Petroleum and Coal	100.0	22.3	77.7	0.0	0.0	0.0	0.0	0.0
Iron and Steel	100.0	70.4	19.9	9.7	0.0	7.7	2.0	0.0
Nonferrous metal	100.0	26.0	62.5	11.6	6.6	3.9	1.1	0.0
General machinery	100.0	33.3	62.3	4.4	0.2	4.2	0.0	0.0
Electric machinery	100.0	27.7	36.2	36.1	0.4	35.7	0.1	0.0
Information and communication equipment	100.0	41.0	32.0	27.1	1.0	25.4	0.2	0.0
Transport equipment	100.0	36.8	59.3	3.9	2.1	1.1	0.7	0.0
Precision instruments	100.0	45.6	50.6	3.8	0.0	3.8	0.0	0.0
Miscellaneous manufacturing products	100.0	40.8	36.7	22.5	0.4	20.2	1.9	0.0

Table 10a Regional Effects of Japanese Overseas Production in China:

A Case of Information and Communication Equipment Sector

Unit: Million US dollars, %

	Local Production in China	Replaced Production in Japan	Induced Product by Local Production in China	Induced Product by Replaced Production in Japan	Overall Effect
Aichi		-69.51	5.60	-98.55	-92.96
Rest of Japan			110.85	-58.18	52.67
Central Coast	173.78		242.89	-0.49	242.40
Other Coast			20.35	-1.07	19.28
Rest of China			16.45	-0.41	16.04
Import			14.65	-8.00	6.66
Japan, Total	0.00	-69.51	116.45	-156.74	-40.29
China, Total	173.78	0.00	279.69	-1.97	277.72
Total	173.78	-69.51	410.79	-166.70	244.09
Aichi		-40.00	3.22	-56.71	-53.49
Rest of Japan			63.79	-33.48	30.31
Central Coast	100.00		139.77	-0.28	139.49
Other Coast			11.71	-0.62	11.10
Rest of China			9.46	-0.24	9.23
Import			8.43	-4.60	3.83
Japan, Total	0.00	-40.00	67.01	-90.19	-23.18
China, Total	100.00	0.00	160.94	-1.13	159.81
Total	100.00	-40.00	236.39	-95.93	140.46

Table 10b Regional Effects of Japanese Overseas Production in China:

A Case of Information and Communication Equipment Sector

Unit: Million US dollars

	Aichi	Rest of	Central	Other Coast	Rest of
1 Agriculture, fishery, and forestry	-0.02	0.00	0.60	0.29	0.36
2 Crude petroleum and natural gas products	0.00	0.00	0.02	0.21	0.40
3 Metal ore mining	0.00	0.00	0.04	0.28	0.49
4 Coal mining and processing and others	-0.01	0.00	0.31	0.85	1.44
5 Food products and tobacco	-0.09	-0.03	0.45	0.23	0.24
6 Textile products	-0.02	0.07	0.64	0.18	0.14
7 Wearing apparel, leather and furs	-0.02	0.04	0.65	0.15	0.07
8 Sawmills and furniture	-0.05	0.03	0.38	0.09	0.14
9 Paper and pulp	-0.48	0.13	1.79	0.34	0.21
10 Petroleum processing and coking	-0.08	0.22	0.62	0.39	0.52
11 Chemicals	0.05	4.41	7.30	1.92	1.46
12 Nonmetal mineral products	-0.95	0.24	3.33	0.69	1.09
13 Primary metals	-0.87	1.39	4.60	1.90	2.91
14 Metal products	-0.59	0.93	2.72	0.62	0.38
15 General Machinery	0.00	0.70	1.18	0.40	0.40
16 Electric machinery	0.24	3.01	1.41	0.30	0.17
17 Information and communication equipment	-70.76	29.90	194.42	5.37	1.09
18 Transport equipment	-0.13	0.02	0.90	0.26	0.34
19 Precision instruments	0.00	0.13	0.10	0.04	0.03
20 Other manufacturing products	-0.92	0.42	0.75	0.32	0.34
21 Electricity, steam and hot water, and gas	-0.88	0.67	2.09	0.60	0.64
22 Water production and supply	-0.09	0.16	0.16	0.04	0.03
23 Construction	-0.42	0.33	0.37	0.13	0.06
24 Wholesale and retail trade	-3.17	1.60	7.11	1.40	1.29
25 Transport and warehousing	-1.69	1.57	1.94	0.75	0.76
26 Services	-11.99	6.73	8.52	1.52	1.03
Total	-92.96	52.67	242.40	19.28	16.04

Table 11a Regional Effects of Japanese Overseas Production in China:

A Case of Transport Equipment Sector

Unit: Million US dollars, %

	Local Production in China	Replaced Production in Japan	Induced Product by Local Production in China	Induced Product by Replaced Production in Japan	Overall Effect
Aichi		-74.38	37.96	-36.84	1.11
Rest of Japan			138.14	-14.65	123.49
Central Coast			18.11	-0.13	17.98
Other Coast	185.94		320.20	-0.24	319.97
Rest of China			32.70	-0.14	32.56
Import			20.44	-2.00	18.44
Japan, Total	0.00	-74.38	176.10	-51.50	124.60
China, Total	185.94	0.00	371.02	-0.51	370.51
Total	185.94	-74.38	567.56	-54.00	513.55
Aichi		-40.00	20.41	-19.82	0.60
Rest of Japan			74.29	-7.88	66.42
Central Coast			9.74	-0.07	9.67
Other Coast	100.00		172.21	-0.13	172.08
Rest of China			17.59	-0.07	17.51
Import			10.99	-1.08	9.92
Japan, Total	0.00	-40.00	94.71	-27.69	67.01
China, Total	100.00	0.00	199.54	-0.27	199.26
Total	100.00	-40.00	305.24	-29.04	276.19

Table 11b Regional Effects of Japanese Overseas Production in China:

A Case of Transport Equipment Sector

Unit: Million US dollars

	Aichi	Rest of	Central	Other Coast	Rest of
1 Agriculture, fishery, and forestry	0.00	0.20	0.20	1.62	0.72
2 Crude petroleum and natural gas products	0.00	0.01	0.03	0.46	0.85
3 Metal ore mining	0.00	0.01	0.03	2.52	1.23
4 Coal mining and processing and others	0.00	0.15	0.18	2.69	2.19
5 Food products and tobacco	0.01	0.29	0.17	1.16	0.45
6 Textile products	0.11	0.55	0.40	0.95	0.28
7 Wearing apparel, leather and furs	0.01	0.16	0.26	1.25	0.17
8 Sawmills and furniture	0.02	0.27	0.26	1.01	0.50
9 Paper and pulp	0.07	1.52	0.34	2.02	0.43
10 Petroleum processing and coking	0.06	1.64	0.40	1.91	1.32
11 Chemicals	0.18	5.06	2.64	7.99	2.42
12 Nonmetal mineral products	0.12	1.26	0.36	3.31	1.59
13 Primary metals	1.64	19.91	3.50	10.61	6.66
14 Metal products	0.28	2.76	0.54	8.97	0.68
15 General Machinery	1.73	13.34	1.02	15.80	1.21
16 Electric machinery	0.58	5.68	0.77	4.69	0.52
17 Information and communication equipment	0.15	3.96	0.36	0.73	0.16
18 Transport equipment	-5.40	30.09	2.32	209.35	2.43
19 Precision instruments	0.04	0.65	0.06	0.39	0.08
20 Other manufacturing products	0.43	5.06	0.50	1.89	0.82
21 Electricity, steam and hot water, and gas	0.08	2.26	0.58	4.81	1.36
22 Water production and supply	0.01	0.41	0.05	0.45	0.08
23 Construction	0.03	0.85	0.06	1.86	0.13
24 Wholesale and retail trade	0.17	5.02	1.21	10.56	2.73
25 Transport and warehousing	0.54	8.46	0.58	5.68	1.47
26 Services	0.26	13.95	1.18	17.30	2.07
Total	1.11	123.49	17.98	319.97	32.56