Decline of the Footwear Industry in Japan and the United States as a Result of the Global Shift in Production

Decline of the Footwear Industry in Japan and the United States as a Result of the Global Shift in Production

Shun-ichiro YAMAMOTO

Abstract Since the 1970s, the primary production bases of footwear in the world have been shifted from the developed countries to the developing countries, particularly China and the Southeast Asian countries. In Japan and the United States, the severe decline in footwear production has been caused by the inflow of imports from China. This global production shift has been prompted by the locational behavior of multinational corporations. Major footwear companies in the US have allocated their production bases to East and Southeast Asia, particularly China and Indonesia. Although Japanese companies continue production through domestic subsidiaries in the country, major companies have simultaneously made subcontracts with factories in China, Indonesia and Hong Kong. The acquisition of the competitive advantage in the high value-added production is the only way to oppose the cheap and abundant labor in the developing countries and ensure the survival of footwear industry in the developed countries. However, as they have not succeeded, the footwear production in the two countries is still continuing with a tendency toward severe decline.

Key words: footwear industry, high value-added production, industrial activation policy, Japan, the United States

1. Introduction

Since the 1970s, the world economy has entered into a stage referred to as the age of globalization. The industrial structure of the world has greatly changed with an intensification of international competition. The production system has changed from mass production to diverse types and small-scale production along with the diversification of consumer orientation in the market in developed countries. With regard to production, increased thoroughness in terms of efficiency has become a requisite for survival in the global competition, and most industries in the developed countries have been oriented toward high value-added production. On the other hand,

* Research Student, Institute of Geography, Graduate School of Science, Tohoku University, Sendai 980-8578, Japan

Science Reports of Tohoku University, 7th Series (Geography)
Vol. 53, Nos. 1/2, March, 2004, 57-74

as globalization of the economy progresses, the mass production system, particularly that of daily consumer goods, has increasingly shifted to East and Southeast Asia due to abundant cheap labor. Furthermore, even the flexible manufacturing system has been steadily shifting its bases from the developed countries to the developing countries. The rapid growth of the footwear industry in the ASEAN countries and China, following the newly industrializing economies (NIEs), has become a serious threat to the manufacturing industry in the developed countries. The development of a new and competitive flexible manufacturing system is required in order for the developed countries to sustain their manufacturing.

This paper examines the process of the decline of footwear industry in Japan and the United States as a case of the decline of the daily consumer goods industry in the advanced countries. The paper is divided into five sections including the section of introduction. The second section presents an overview of the footwear production in the world followed by the structural changes in the footwear industries in the two countries. The third section presents the characteristics of footwear imports in the two countries and the differences in the locations of manufacturing subsidiaries between the Japanese multinational corporations and ones of the US. The fourth section examines the effects of industrial activation policy executed in the US in the latter half of 1970s, particularly with regard to the influence of the policy on a domestic industry. The concluding section presents the progress of the footwear industry in the developed countries.

The sources of data in this paper are mainly industrial statistics and material of the related industrial unions in the two countries. Moreover, the annual reports and financial statements of each US and Japanese enterprise are used as the data respectively. The footwear referred to in this paper includes three types, leather, rubber and plastic.

2. Changes in the Footwear Industry in Japan and the United States due to the global shift in footwear production

2.1. Drastic change in the spatial distribution of the global footwear production

Figure 1 shows the global distribution of the footwear production, excluding rubber footwear[1]. In 1980, the Soviet Union was the largest footwear-producing country. It accounted for 19.0% of the global footwear production. Following the Soviet Union, China, the US and Italy accounted for 14.4%, 9.6% and 7.8% of the global production, respectively. However, in 1992, the production in China increased rapidly and it became the largest producer, accounting for 38.4% of the global production. As a result, the footwear production in the developed countries suddenly decreased. For example, the proportion of the US production dropped to 3.9%. To sum up, the

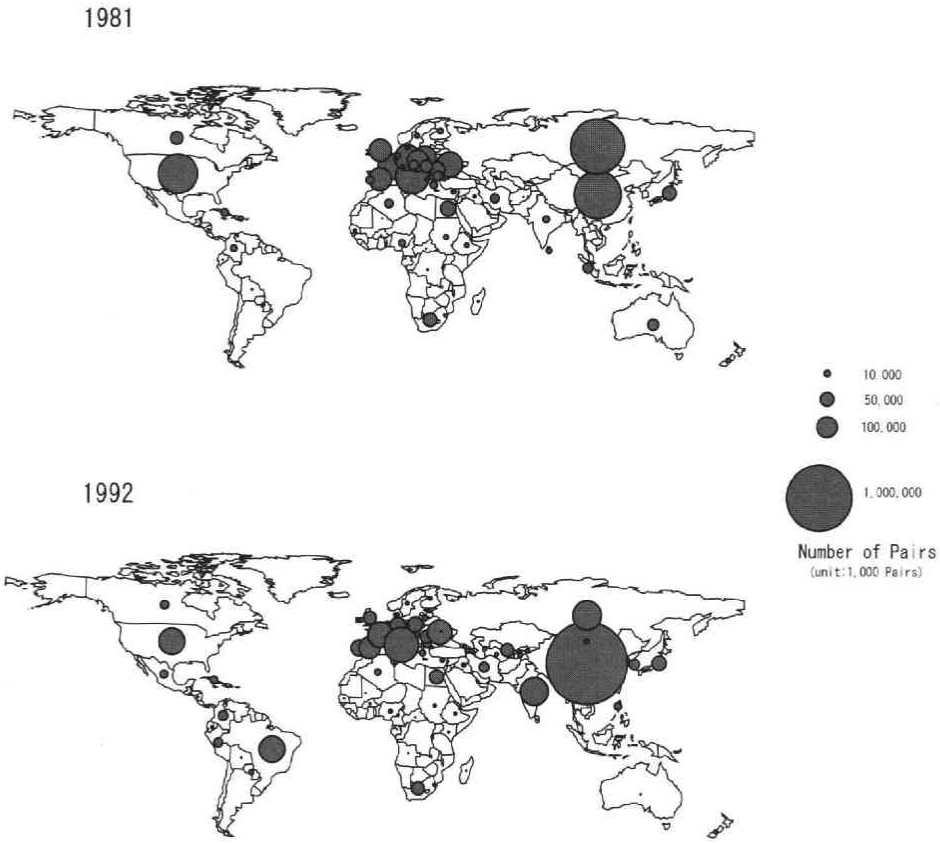

Fig. 1 The spatial distribution of the footwear production in the world (excluding rubber footwear)
Source: Industrial Commodity Statistics Yearbook, Production Statistics, United Nations.

footwear industries in the world have shifted their bases to China due to the preference for a low labor cost.

Table 1 presents the international comparison in terms of wage per hour in the leather footwear industry. The wage disparities between the developed and the developing countries are surprisingly large. The wage level in the US was seven-fold that in Mexico in 1990. The wage level in Southeast Asian countries is lower than that in Mexico. Although the data for China could not be obtained, the wage level in that country is assumed to be lower than that in Southeast Asia. With the intensification of international competition, these wage level disparities resulted in the shifting of the footwear production bases to China and Southeast Asia.

However, the production in Italy had not decreased as much as that in the US.

Table 1 The international comparison in terms of wage per hour in leather footwear industry

Country or Area	1985	1990
Belgium	$7.39	$14.92
Denmark	6.97	15.30
United States	7.27	8.75
France	6.15	12.29
United Kingdom	5.12	10.74
Italy	5.59	13.43
Korea	0.95	2.62
Taiwan	1.20	*
Hong Kong	2.00	3.20
Mexico	1.12	1.34
Brazil	0.65	*
Thailand	0.35	*
Indonesia	0.20	*

Note: The sign * means unknown.
Source: The Bureau of Labor Statistics, US Department of Labor.

Footwear production in Italy has maintained a high ratio of 7.8% in 1980 and 7.0% in 1992. This implies that original fashions in Italy make a high value-added production possible. Moreover, the proportion of the footwear production in Western Europe such as in France, the UK and Spain has also remained high. The market shares in 1980 and 1992 were 5.1% and 3.8% in France, 3.23% and 1.02% in UK, and 3.48% and 2.55% in Spain, respectively.

2.2. Structural changes in the footwear industry in Japan and the US

As shown in Fig. 2, the production of leather footwear rapidly decreased in the US after 1980. The overall production of rubber/plastic footwear also tended to be on the decrease. In Japan, the production of rubber/plastic footwear has rapidly decreased since 1993. Although the leather footwear production had shown a tendency to increase during the 1980s, it drastically decreased after 1991.

Figure 3 shows the number of establishments and employees in the footwear industry in Japan during the period 1961 to 1998. The number of employees in the rubber/plastic shoes industry suddenly decreased from the latter half of the 1960s to

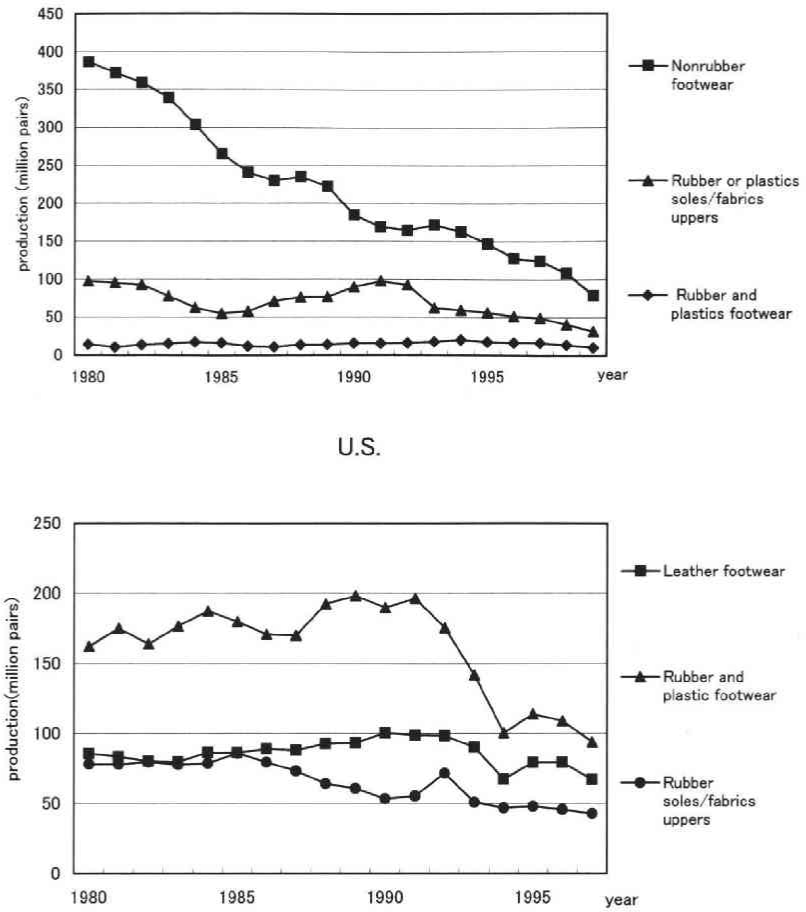

Fig. 2 The transision of footwear production in Japan and the United States
Sources: Census of Manufactures, Industrial Statistics Office, Research and Statistics Department, Ministry of Economic, Trade and Industry in Japan.
Current Industrial Reports, the Census Bureau, US Department of Commerce.

the latter half of the 1970s. This trend implies that the rubber/plastic footwear industry in Japan had increasingly shifted to other Asian countries. On the other hand, the number of employees in the leather footwear industry did not decrease until the early 1990s. In comparison with the rubber/plastic footwear industry, the leather footwear industry requires high-grade technologies and expensive materials. Therefore, it was relatively difficult to transfer the production of leather footwear industries to the developing countries.

On the other hand, the number of establishments did not show a considerable decrease. A large portion of the establishments are considered to be small-scale

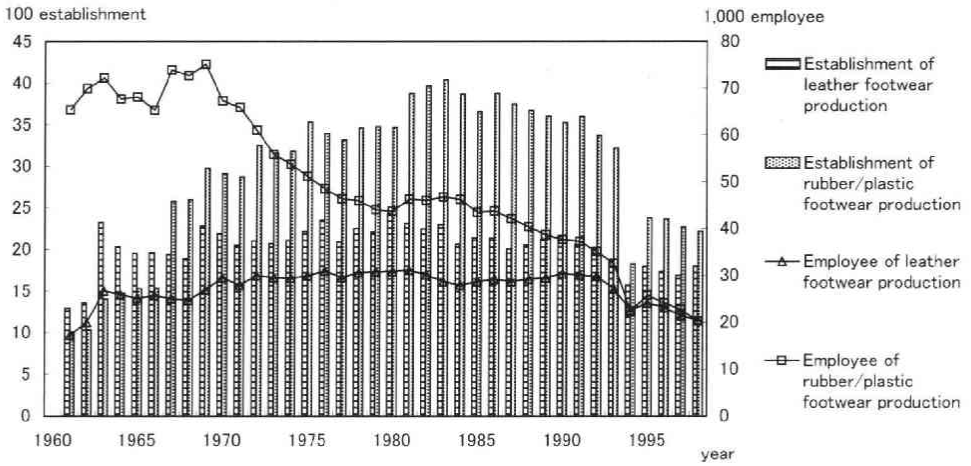

Fig. 3 The number of establishment and employee in the footwear industry in Japan
Source : Census of Manufactures, Industrial Statistics Office, Research and Statistics Department, Ministry of Economic, Trade and Industry in Japan.

Table 2 The production capacity of leather footwear in Japan and the United States in 1997

	Number of establishment	Number of employee	Employee per establishment	Value of shipments ($1,000)	Value added by manufacture ($1,000)	Value added per employee ($1,000)
Japan	1,689	21,392	13	2,910,877	1,077,081	50.3
United States	346	29,492	85	3,157,955	1,597,749	54.2

Note : The Japanese value is caluculated in the exchange rate, 1$ = ¥120.99 in 1997. The numerical value in the U.S. does not include any kid's footwear and athletics footwear.
Source : Census of manufactures 1997, Industrial Statistics Office, Economic and Industrial Policy Bureau, Ministry of Economy, Trade and Industry in Japan.
Footwear Production-1997, Current Industrial Reports, the Census Bureau, US Department of Commerce.

subcontractors. However, the number of leather footwear establishments suddenly decreased after the burst of the bubble economy in 1991. Figure 4 indicates the total amount of wages, raw materials, manufacturing goods shipment, and the value-added in the leather and the rubber/plastic footwear industry. The amount of the manufacturing goods shipment in the leather footwear industry had reached a peak in the year 1991, and that in the rubber/plastic footwear had reached a peak in the year 1980. Furthermore, the amount of the value-added had also been decreasing since the year 1991. This suggests that it was difficult to maintain a steady high value-added production in the developed countries.

As shown Table 2, the number of establishments in Japan in the year 1997 was

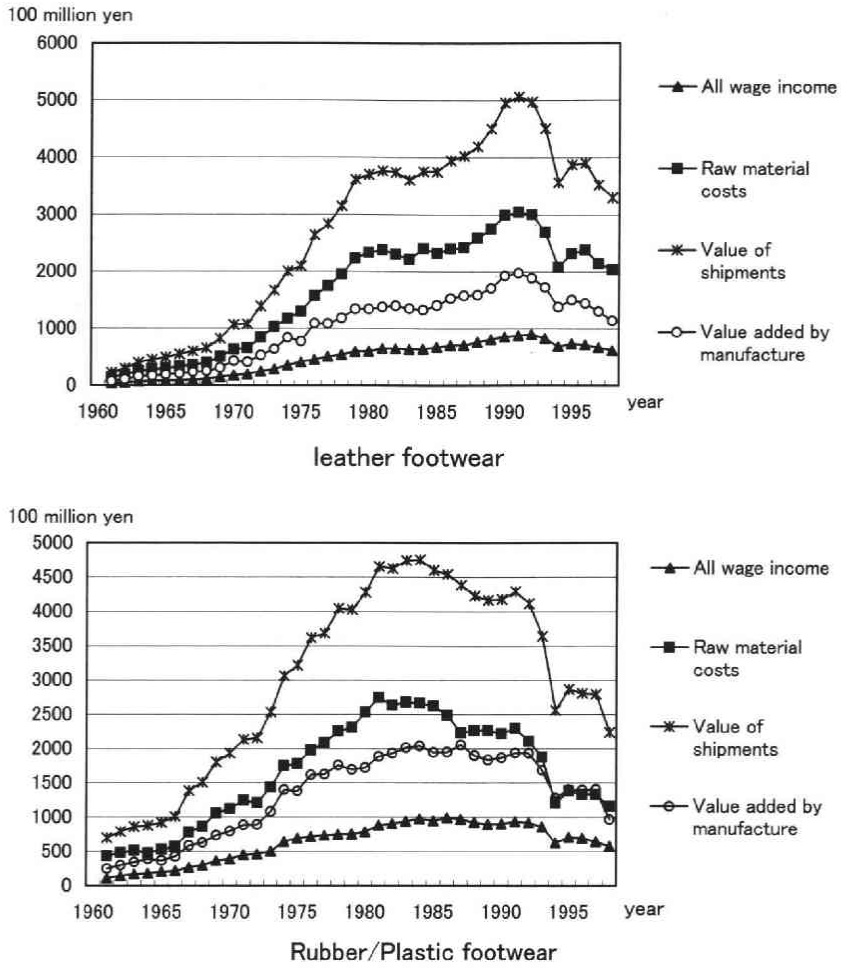

Fig. 4 The trend of the footwear industry in Japan
Source: Census of Manufactures, Industrial Statistics Office, Research and Statistics Department, Ministry of Economic, Trade and Industry in Japan.

five-hold that in the US. The number of employees per establishment in Japan and the US were 13 and 85, on an average, respectively. However, the amount of the value-added per employee was $50,000 in Japan and $54,000 in the US. The difference in the value-added per employee between the two countries was small despite the large disparity in the average number of employees per establishment. It can be pointed out that the productivity of the US in the footwear industry is lower than that of Japan[2]. On the other hand, the total amount footwear consumption tends to gradually increase in the US (Fig. 5). The amount of footwear imports has remarkably increased since

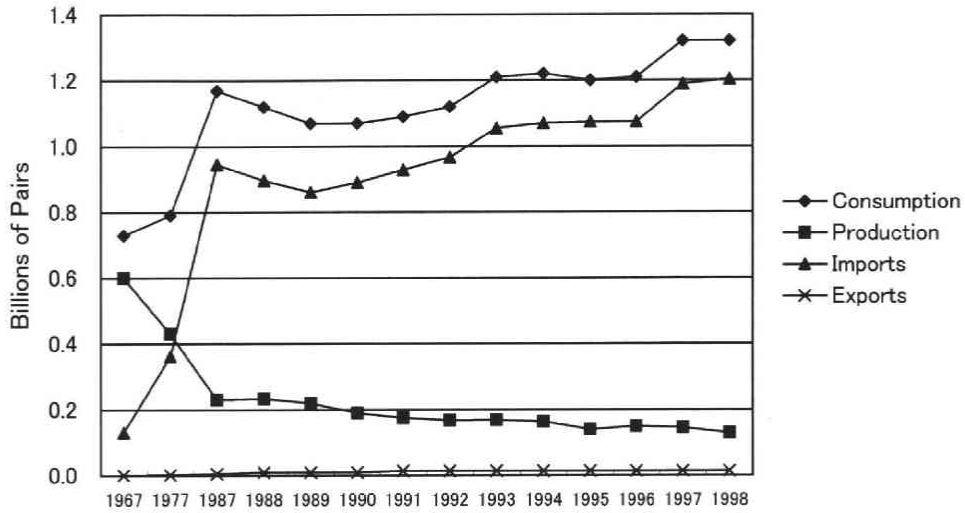

Fig. 5 The market of the footwear in the United States
Source: Current Highlights of the Nonrubber Footwear Industry, Footwear Industries of America.

the late 1960s. The dependence rate of the imports to the consumption reached approximately 80% in the late 1980s.

3. The characteristics of footwear imports in Japan and the United States

Table 3 lists export countries classified by the amount of footwear imports and the average price of the footwear imported in Japan and the United States in 1999. Chinese products occupied a large part of the imports in the two countries. In terms of average price of the product, the imports from the East and Southeast Asian countries such as China and Indonesia were low-priced (Chinese and Indonesian products priced at $6.2 and $9.3, respectively, in the US), while imports from the advanced countries such as Italy and Britain were generally high-quality goods (Italian and British products priced at $24.5 and $34.1, respectively, in the US). Japan also shows a similar tendency. The price difference between the low-grade and the high-quality products is approximately ten-fold. In addition, footwear in the US is primarily imported from China followed by countries from the American continent such as Brazil, Mexico, the Dominican Republic and Canada. Japan primarily imports from China followed by Southeast and East Asian countries.

Furthermore, Table 4 indicates the change in the main export countries to Japan (the ten best) from 1990 to 2001. In the case of leather footwear, the share of the developed countries in terms of import quantity was higher in 1990. Italy, in particular, occupied approximately 37% of the total amount of imports in quantity and 56%

Table 3 The list of main export countries classified by the amount of footwear imports in Japan and the United States in 1999 (the ten best)

United States

Rank	country	The amount of footwear imports (1,000 pairs)	The share (%)	Average price per pairs (dollar)
1	China	984,847	75.5	6.9
2	Brazil	83,777	6.4	11.2
3	Indonesia	63,340	4.9	9.3
4	Italy	46,484	3.6	24.5
5	Thailand	18,759	1.4	12.7
6	Spain	17,895	1.4	17.6
7	Taiwan	12,562	1.0	6.2
8	Mexico	12,309	0.9	17.0
9	Hong Kong	7,165	0.5	7.0
10	United Kingdom	6,930	0.5	34.1
	Rest of World	51,195	3.9	18.1
	Total	1,305,262	100.0	8.8

Japan

Rank	country	The amount of footwear imports (1,000 pairs)	The share (%)	Average price per pairs (dollar)
1	China	339,415	82.3	5.1
2	Indonesia	22,481	5.5	3.2
3	Korea, South	11,322	2.8	18.5
4	Taiwan	10,559	2.6	5.2
5	Italy	4,790	1.2	56.0
6	USA	3,864	0.9	27.1
7	Vietnam	3,808	0.9	11.1
8	Thailand	3,326	0.8	9.9
9	Philippines	2,789	0.7	5.3
10	Spain	1,872	0.5	21.3
	Rest of World	8,124	2.0	24.9
	Total	412,354	100.0	6.7

Note: The Japanese average value is caluculated in the exchange rate, 1$=¥113.9 in 1999.
Source: Statistical Reporter, American apparel and footwear association in the US.
Trade Statistics, the Customs and Tariff Bureau, Ministry of Finance in Japan.

in value. However, in 2001, as the ratio of the Chinese imports rapidly increased, Italy's share decreased to 23% in quantity. Moreover, Asian countries other than China, Cambodia, Bangladesh and Myanmar also increased their shares in the quantity of imports. However, in terms of value, the ratio of Italy remained high in 2001. The

Table 4 The change in the main export countries to Japan from 1990 to 2001 (the ten best)

Leather footwear Quantity

Rank	1990 Country	%	2001 Country	%
1	Italy	37.34	Italy	22.52
2	Korea	11.20	China	22.18
3	Taiwan	7.87	Cambodia	18.03
4	United States	6.65	Bangladesh	9.85
5	United Kingdom	4.93	Myanmar	5.02
6	Spain	4.77	Spain	4.90
7	Portugal	4.36	Korea	3.19
8	China	4.19	Taiwan	2.15
9	India	4.09	United Kingdom	1.65
10	Switzerland	3.59	Portugal	1.60
	Rest of World	11.01	Rest of World	8.91

Leather footwear Value

Rank	1990 Country	%	2001 Country	%
1	Italy	56.21	Italy	46.90
2	Switzerland	6.35	China	13.59
3	United States	6.20	Cambodia	8.19
4	United Kingdom	5.89	Spain	5.94
5	Korea	4.98	Bangladesh	4.11
6	France	4.88	United Kingdom	3.26
7	Spain	3.46	France	2.99
8	Taiwan	3.35	Korea	2.36
9	Portugal	2.13	Myanmar	2.26
10	China	1.31	Germany	1.66
	Rest of World	5.24	Rest of World	8.73

Rubber footwear Quantity

Rank	1990 Country	%	2001 Country	%
1	Taiwan	48.02	China	91.82
2	China	24.63	Korea	1.95
3	Korea	21.66	Indonesia	1.77
4	Indonesia	4.48	Taiwan	1.61
5	Thailand	0.41	Vietnam	0.92
6	Hong Kong	0.29	Thailand	0.71
7	Italy	0.18	Spain	0.30
8	Philippines	0.10	Italy	0.29
9	United States	0.10	Germany	0.19
10	France	0.05	Hong Kong	0.08
	Rest of World	0.08	Rest of World	0.37

Rubber footwear Value

Rank	1990 Country	%	2001 Country	%
1	Taiwan	45.28	China	85.96
2	Korea	33.73	Korea	4.32
3	China	15.70	Indonesia	2.24
4	Indonesia	3.34	Vietnam	1.60
5	Italy	0.56	Taiwan	1.46
6	United States	0.51	Italy	1.42
7	Thailand	0.39	Thailand	1.09
8	Hong Kong	0.15	Germany	0.49
9	Philippines	0.11	United States	0.38
10	France	0.10	Spain	0.35
	Rest of World	0.14	Rest of World	0.70

Source: The Customs Clearance Statistics, The Customs and Tariff Bureau, Ministry of Finance in Japan.

ratios of Italy and China were 47% and 14% respectively. On the developed countries, Italy is only one that has succeeded in being the main exporter by achieving high value-added production. Thus, Italy maintained the primary position in terms of the value of imports although its share in the quantity of imports had decreased considerably. Among the developed countries, Italy produces the most fashionable products.

On the other hand, in the case of rubber/plastic footwear, Taiwan and Korea, in

addition to China, were the primary exporting countries to Japan in 1990. However, Chinese products overwhelmed the market in terms of both quantity (91.8%) and value (86.0%) in 2001. That is, Chinese products hold an unchallenged position with regard to imports. In the case of the high-quality products, Western European products, particularly those from Italy, still occupy the majority of the market. In other words, the polarization of production into high-quality goods and low-priced goods is accelerating in the import market of the developed countries. It is assumed that the footwear industries in the Western European countries are challenging the difficult self-transformation in order to accomplish the high value-added production through conversion of the sales strategy, shortening of lead time, and so on. They are focusing on a high-quality product market in the developed countries in order to avoid direct competition with developing countries such as China.

With regard to the shift of the footwear industry from the developed countries to the developing countries, Fig. 6 indicates a concept chart concerning the international division of labor in the footwear industry on a worldwide scale. Incidentally, the classification of the footwear industry in this table is based on the US International Trade Commission. The production bases of the labor-intensive segment have primarily shifted to China and Southeast Asia. Most of their products are manufactured by the factories exploited under the corporate control of a vertical integrated organiza-

<table>
<tr><th>Production Formation</th><th>Production Base</th><th>Corporate Organization</th><th>Production/Marketing Strategy</th><th>Company Scale</th><th>Type of Goods</th></tr>
<tr><td rowspan="2">Labor-intensive
Mass production</td><td rowspan="3">South East Asia
Eastern Europe
China
Brazil
Mexico
Portugal
etc.</td><td rowspan="2">Multinational corporation
(Vertical integration)</td><td>Automated machinery</td><td rowspan="2">Injection and Volume producers</td><td rowspan="2">Rubber/ Plastic footwear</td></tr>
<tr><td>Narrow range of type and style limited</td></tr>
<tr><td rowspan="2">Capital-intensive
Diversified small-quantity production</td><td>outsourcing
Subcontractor's factory</td><td>Using low cost labor</td><td rowspan="2">Large producers with integrated manufacturing and retailing operations</td><td>Leather footwear</td></tr>
<tr><td rowspan="3">Italy
France
Japan
U.S.A
U.K.
etc.</td><td>outsourcing
Multinational corporation
(Quasi-vertical integration)</td><td>Highly labor-intensive manufacturing process</td><td>Athletic footwear producers</td><td>Athletic footwear</td></tr>
<tr><td>Craft production</td><td>outsourcing
Small and medium enterprises
(Horizontal integration)</td><td>Significant portion of domestic production</td><td>Small manufacture of high-priced and good-quality</td><td rowspan="2">Leather footwear</td></tr>
<tr><td></td><td>Venture/tiny businesses</td><td>Concentrate on limited type respond to consumer demand</td><td>Smaller specialty firm</td></tr>
</table>

Fig. 6 The international division of labor of footwear industry

tion centered on a multinational corporation. The design of and materials for the production are usually limited and these characteristics lead to mass production. Their features are suitable for the production of rubber/plastic footwear. Recently, a quasi-vertical integrated product system for the arrangement of the subcontract factories in Southeast Asia is being promoted by a multinational corporation in the field of athletics footwear.

On the other hand, the high value-added products (fashionable leather footwear) continue to be manufactured in the developed countries, primarily in Italy. Most small and medium-sized establishments in the developed countries are also continuing to discover the optimum method of achieving sustainable high value-addition. In addition, production by artisans such as customized and handmade goods exist in niche markets. However, despite the endeavors of footwear industries in the developed countries, high value-added production is gradually shifting to China and Southeast Asia. Small and medium-sized businesses in the developed countries find it difficult to compete with their counterparts in the developing countries, despite improvements such as a system of social division of labor and diversified small-quantity production.

With regard to the global shift of footwear production, the direct investments of multinational corporations in the developing countries are a decisive factor. In other words, the multinational corporations in the developed countries exploit the abundant and cheap manpower in the developing countries. The production in China and Southeast Asia is based chiefly on OEM (Original Equipment Manufacturer). Therefore, it is necessary to investigate the actual production organizations of the multinational corporations, particularly in the field of athletic footwear. Table 5 shows the locations of the manufacturing subsidiaries of major Japanese and US footwear companies.

Five Japanese enterprises continue to hold domestic manufacturing subsidiaries; three have traded with the subcontractor factories in China, Indonesia, and Hong Kong. On the other hand, all enterprises in the US are relocating their production bases to the East and Southeast Asia, particularly to China and Indonesia. These enterprises depend on abundant cheap manpower of the East and Southeast Asia.

4. Limitations of the Industrial Support Policies in the US Footwear Industry

In order to promote the high value-added production in the footwear industry, the US government had implemented various industrial support policies in the 1980s. However, these policies had not been successful in arresting the trend of the decline of the domestic footwear industry. This chapter examines the limitations of these policies. The government policies are roughly divided into two. One is a trade protection policy to limit the imports and the other is an industrial support plan to

Table 5 The location of the manufacturing subsidiaries of major Japanese and US footwear companies

Japanese enterprise	Sales (million yen)	The component ratio of the sales	Domestic manufacturing subsidiary	The overseas manufacturing subsidiary	Year on the data
Mizuno	155926	golf 29.72% sportswear 22.14% sports shoes 7.48%, others 23.62%,	Mizuno Runbird (Yamasaki, Hyogo Pref.)		2001
Asics	126445	sports shoes 54.3% sportswear 27.2% others 20.6%	Sanin Asics industry (Sakaiminato, Tottori Pref.)	Jiang Su Ai Shi Ke Si enterprise (China)	2001
Achilles	108428	plastics 32.72% shoes 30.82% industrial materials 32.81% others 3.65%	Barco Achilles Shimane (Yokota, Shimane Pref.)	Guang Zhou Chong De footwear enterprise (China) P.T. Surya Achilles Indonesia	2000
Okamoto	70671	building/industrial materials 26.98% tire 22.75% footwear 20.04% medical/household goods 14.34% plastics/film 11.27% others 4.63%	Okamoto Sewing (Ono, Fukushima Pref.)	Okamoto (Hong Kong) enterprise	1995
Sekaicho Rubber	24417	footwear 78.6% chemicals 21.4%	Tokuyama Sekaicho (Nanyo, Yamaguchi)		1996

US enterprise	Sales (million dollar)	The component ratio of the sales	Domestic manufacturing bases	The overseas manufacturing bases	Year on the data
Nike	9489	footwear 62.12% apparel 30.53% equipment and other 7.35%		China, Indonesia, Vietnam, Thailand, others	2001
Reebok	2993	footwear 69.54% apparel 30.46%		China, Indonesia, Thailand, Hong Kong, Taiwan, South Korea	2001
Timberland	1092	footwear 77.5% apparel and accessories 22.5%		China Taiwan, Europe, Mexico, South and Central America	2000
Genesco	747	footwear 100%	Nashville, Tennessee (Close down in 2003)	China, Italy, Mexico Brazil, Indonesia Taiwan, U.K.	2002
Converse	209	footwear 61.39% apparel 38.61%	Close down in 2001	China, Taiwan, Macau Vitnam, Indonesia	2000

Source: Asset Securities Reports in Japanese Companies.
Security and Exchange Commission, Form 10-K in the US.

stimulate a domestic industry. This section discusses the latter policy, evaluating its influence on the domestic footwear industry.

"Footwear Industry Revitalization Program 1980" is one of the industrial policies on the footwear industry, passed in July 1979. This program had been advanced by three organizations: Economic Development Administration, Office of Productivity, Technology and Innovation, and International Trade Administration. They were affiliated to the US Department of Commerce. In the beginning, from 1978 to 1980, these organizations had invited applicants for support. The number of establishments that applied for this program was 126. Finally, 100 establishments were selected by the management consultation of the Department of Commerce and were supported by a grant-in-aid of 58 million dollars. In addition, a footwear expert team was organized with the aim of achieving an improvement in the productive efficiency in a certified establishment. As a result of their assistance, the productive efficiency, which included a pure margin increase, the reduction of manufacturing cost, the improvement in productivity and the decrease in defective goods, increased greatly. Table 6 shows the change in the productive efficiency in a certified establishment before and after technological assistance in 1980. Almost all the factors of productive efficiency were improved, although the amount of output per hour remained unchanged. Furthermore, the expert team executed the export promotion program in order to increase exports.

Table 6 The change in the productive efficiency in a certified establishment before and after technological assistance in 1980

Performance Indicator	Industry Norm	Before TA	After TA	Net Change or Percent Change
Net Profit before Tax (% of Sales)	4.5	(6.3)	3.6	9.9
Gross Margin (% of Net Sales)	19.9	12.8	17	4.2
Avg. Hrs Wkd/Emp./Wk.	36.2	36.5	36.5	–
Operator Earning (Annual $)	7,718	7,531	8,478	12.6
Employee Turnover (%)	65-80	89	77	−12
Production (pairs)	N/A	320,029	378,452	18.3
Productivity (Prs./Emp./Man Hr.)	1.58	3.27	3.88	18.7
Factory Defect Rate (% Total Production)	0.5-2.5	4.3	2.7	−1.6

Source: Footwear Industry Revitalization Program 1980, Annual Progress Report, US Department of Commerce.

After elaborate marketing researches on potential export countries, the team decided on the creative US fashion style, and the certified establishments actively participated in events such as the execution and the fashion show in the European countries. The program was successful, despite the initial skepticism of the government and the industrial association about this. As shown in Table 7, the exports to Europe increased by 124% for three years from 1977 to 1979. The exports to Sweden, West Germany, France, and Italy increased both in amount and growth rate.

In addition, the development of a new technology was continuously encouraged. Firstly, to achieve a unique technological development for gaining a competitive advantage in the domestic footwear industry, CAD and CAM were introduced. Moreover, the latest equipment such as the forepart pulling, lasting, and bottoming machines with numerical control, automatic bottom cementing machines, tackless insole attaching machines, injection molding machines, and so on were introduced. As a result, improvement in productivity was accomplished and labor cost was reduced. Secondly, the program brought about an improvement in design and implemented a new marketing method in order to improve the existing technology and to trigger technological innovation. Finally, in order to provide training opportunities to the

Table 7 The export markets in US footwear industry (1977-1979)

Country	1977 (pairs)	1978 (pairs)	1979 (pairs)	Change (%) 78/77	Change (%) 79/77
Sweden	39,909	61,005	145,069	52.9	263.5
Norway	62,550	70,333	117,598	12.4	88
Denmark	3,549	25,170	20,330	609.2	472.8
United Kingdom	148,589	207,094	251,387	39.4	69.2
Netherlands	52,634	104,302	68,076	98.2	29.3
Belgium	14,280	17,331	30,754	21.4	115.4
West Germany	76,930	205,586	264,705	167.2	244.1
France	72,304	165,089	232,113	128.3	221
Switzerland	64,497	87,214	136,297	35.2	111.3
Spain	76,527	35,921	61,673	-53.1	-19.4
Italy	42,621	92,231	137,427	116.4	222.4
Europe	654,390	1,071,276	1,465,429	63.7	123.9
All countries	5,411,461	6,934,773	9,262,058	28.1	71.2

Source: Footwear Industry Revitalization Program 1980, Annual Progress Report, US Department of Commerce.

employers and managers, the American Shoe Center was established in Philadelphia.

As mentioned above, the certified establishments experienced greatly increased productivity due to such assistance. The volume of exports was greatly extended as a result of the export promotion program in particular. From among the certified establishments, 23 companies set up a new market in foreign countries. Therefore, the purpose of this program is generally considered to have a certain effect.

However, a comparison between the certified and the non-certified establishments revealed minor differences in performance. For example, the decrease in employment from 1976 to 1978 was smaller in the non-certified than in the certified establishments. This influenced the entire domestic industry due to the limitation of the program. As shown in Table 8, the inflow of imports continued to increase during the term of the program. In other words, the increase in exports could not contain the inflow of imports.

It is understood that the effects of the industrial support program were limited with respect to time and scope of the industry. Judging from the decline in the domestic output in recent times, it is obvious that the program has not led to the maintenance of a long-term productive capacity. As regards the small and medium-sized establishments, the introduction of a new technology for product innovation is difficult due to the shortage of capital. They are thus unable to gain a competitive advantage in the high value-added production. The footwear production in the US continues to encounter the difficulties in high value-added production. In brief, the impasse of the value-added production in the developed countries exposes the limitations of government support through technological and financial assistance.

Table 8 Economic highlights in the US leather footwear

Indicator	1978	1979	Net or Change (%)
Production (1,000 Pair)	418,948	381,171	− 9.0
Exports (1,000 Pair)	6,935	9,261	+33.5
Imports (1,000 Pair)	373,515	404,563	+ 8.3
Market Supply (1,000 Pair)	785,528	776,473	− 1.1
Import Penetration	47.6%	52.1%	+ 4.5
Employment (1,000)	157.8	148.9	− 5.6
Average Weekly Earnings	$138.81	$148.12	+ 6.7
Average Weekly Hours	37.0	36.2	− 2.2
Unemployment Rate	8.2%	8.0%	− 0.2

Source: Footwear Industry Revitalization Program 1980, Annual Progress Report, US Department of Commerce.

5. Concluding remarks

As present, China is the largest footwear-producing country in the world. The share of China in the total global production touched 39% in 1992. The competitive advantage of China in this industry is primarily due to the factor of low wages. Thus, the footwear production bases have increasingly shifted to China and Southeast Asia. The inflow process of imports that resulted in a decrease in the domestic production in Japan and the US is one that corresponds to the footwear production trend in the world. It is the multinational corporations that prompted the global shift in footwear production. In other words, they established the quasi-integrated manufacturing system to arrange for the subcontractors in China and Southeast Asia. Most small and medium-sized enterprises in the developed countries are also tackling the difficulty of achieving sustainable high value-added production. However, it is difficult to compete with the developing countries despite the promotion of exhaustive improvements such as the system of social division of labor and diversified small-quantity production.

On the other hand, Western European products, particularly those from Italy, continue to occupy the largest share of the import value in Japan. Italy had achieved high value-added production by implementing measures such as the conversion of the sales strategy, shortening of the lead time, and so on. They had developed high-quality markets distinct from the low-priced ones in the developing countries. The polarization of production into high-quality and low-grade goods is accelerating rapidly in the import market.

Although the US government had promoted several policies since the 1980s, they neither had a considerable effect on the working efficiency on a long-term basis nor did they lead to the revitalization of the domestic industry. For small and medium-sized enterprises, an improvement in product innovation alone is not capable of acquiring a competitive advantage in the high value-added production over the cheap and abundant labor in the developing countries. The footwear production in the United States and Japan is still unable to accomplish the same level of high value-added production as in Italy. Therefore, the footwear industry in the developed countries should explore a new approach, different from the existing one, in order to maintain their current productive capacity.

Acknowledgements

I would like to thank Prof. M. Hino (Tohoku University) for his constructive comments and suggestions on this article.

Note

1) We should pay attention to the unevenness of these data, drafted by the United Nations (Industrial Statistics Yearbook). This is because these data were gathered from the statistics using different standards in each country.
2) Incidentally, in 2000, the average wage per hour in the US rubber/plastic footwear industry and the leather footwear industry was $26.4 and 24.7, respectively. It can be understood that the wages in the footwear industry are extremely low as compared with those in the other industries ($38.0).

Reference

American Apparel and Footwear Association (2000) : Statistical Report.

Congressional Budget Office, The Congress of the United States (1991) : Trade Restraints and the Competitive Status of the Textile, Apparel, and Non-rubber Footwear Industries.

U.S. Department of Commerce (1980) : Annual Progress Report, Footwear industry revitalization program 1980.

U.S. Census Bureau, U.S. Department of Commerce (1999) : Current Industrial Reports, Footwear Production

U.S. International Trade Commission (1993) : The Economic Effects of Significant U.S. Imports Restraints.

U.S. International Trade Commission, Office of Industries (1993) : Industry and Summary, Footwear.

U.S. Tariff Commission (1969, 1971) : Imports and Tariff provisions effect on domestic shoe industry, Tariff Act of 1930, 1962.

Footwear Industries of America (1999) : Current Highlights of the Nonrubber Footwear Industry.