Chapter———6

Conclusion

Masanori Nakamura

I

Female labour has always held a lower status in society than male labour. Considered auxiliary, female labour has provided the source of supplementary income for the household. For these reasons, women's wages have invariably been low and working conditions poor. Even today, there is no fundamental change in this situation.

In the October 1984 Labour Ministry's White Paper on Female Labour, the number of working housewives exceeded that of housewives with no outside employment for the first time. Of a total of 30,420,000 married women, 15,310,000, or 50.3 per cent, were employed, compared to 14,720,000 who were housewives exclusively. Thus Japan, like other industrialized countries, has entered the era of the "working housewife." One of the most marked changes was that 60 per cent of working women were 35 or older, and the trend for working women to be older, to have better educational credentials, and to work for longer periods has become well established. The number of part-time workers, whose employment status is not secure, also exceeded the 3 million mark for the first time. Women's working conditions continue to be hard, as indicated by the fact that their average wage is only 70 per cent that of men for persons in their forties. Issues involving female labour are certain to take on increasing importance in the years to come.

Although the subject of female labour has begun to attract interest in recent years, this book is one of the few that examine the issue from the viewpoint of technological innovation. Little prior work has been done in this field and I believe that through this book we have been able to add some important research. This final chapter briefly summarizes the content of each chapter.

Female labour came to play an important role in Japan's industrialization process between 1890 and 1910, the years of the industrial revolution.

In the 1900s, female labour accounted for 60 per cent of the industrial labour force, which numbered 800,000. During this period, women worked mainly in the cotton-spinning, silk-reeling, weaving, match-manufacturing, tobacco-manufacturing, straw-plaiting, figured rush mat-making, and coal-mining industries.

The introductory chapter divided female labourers in these industries into six types, and observed the impact of changes in the industrial structure and of production technology on these groups. This book is probably the first in which precise data are presented to trace how the female labour force that took shape during the industrial revolution changed through the First World War period and up to 1945. Since the industrial revolution, female labour had been typified by women working in the textile industry, but new types of female labour in heavy industry emerged during the Second World War years. These new types of female workers were relatively better educated urban dwellers, who can be considered the prototype of the young female labour that appeared in the metalworking and machine industries during the post-war rapid economic growth period. This workforce, in fact, provided the link between the pre- and post-war years.

Chapter 1 deals with female labour in the silk-reeling industry, one of the most heavily researched areas. The study included here takes into special consideration the following points. While the silk-reeling industry has been frequently examined in recent years from the viewpoint of "the social history of technology," studies have concentrated solely on technological change and paid very little attention to the labour force itself. However, the concept of labour productivity incorporates three elements: the object and the means of production, and the workers themselves, and no study that fails to examine the living labourer can be considered a "social history" of technology. Accordingly, Chapter 1 analyses the technological changes that occurred in silk filature and the impact of those changes on the labour force. We discovered that while the level of technology is a determining factor in the quality of the labour force, that dynamic could also be reversed, with the quality of the labour force playing a major role in determining the level of technology. In the silk filature industry, the introduction of mechanized reeling devices (*setchoki*) had a particularly significant impact. Reeling is a basic production process accounting for approximately 50 per cent of silk filature work. The mechanization of silk-reeling technology necessarily meant mechanizing the *setchoki*, but Japanese silk-reelers were unenthusiastic about this prospect until very late, first because they lacked adequate financial resources, and second because, even if they had had the necessary capital, they viewed the introduction of costly *setchoki* devices as a loss as long as skilled, cheap female labour was in plentiful supply. This explains the delay in spread of *setchoki* use. In 1919, the V-shaped revolving *setchoki* was invented, but it took more than a decade before it became commonplace in large filature works. This situation basically defined the status of silk filature workers. The harsh working conditions, low wages, and long working hours, as well as the requirement to live in company dor-

mitories and the piece-rate wage system, were closely connected to a level of silk-reeling technology that depended on the manual dexterity and skill of young female workers.

Chapter 2 focuses on female labour in the coal-mining industry, which has been studied less extensively than male labour. Female labour in this industry took hold only after the industrial revolution. The coal industry had been mechanized only to the extent of introducing a conveyance system for hauling the ore. The coal-mining process itself was not mechanized but continued to rely on manual labour and rudimentary tools. Husband-and-wife work units were predominant, with the husband (*sakiyama*) digging out the coal with a pickaxe and the wife (*atoyama*) hauling the coal to the main shafts. The *naya* (stable) system came into being to supervise labour in these difficult conditions. With increasing mechanization of coal-mining in the 1920s, female labour was eliminated. Coal-mining became fully mechanized because of the need to streamline operations, as the market price of coal had dropped owing to chronic recession and imports of foreign coal were increasing. An additional factor was the introduction of protective legislation for coal-miners. Important technological advances made in coal-mining in the 1920s were the change in extraction method from the pillar method to the longwall method; the spread of blasting; and the introduction of mechanized tools and mechanized haulers. The elimination of female labour from coal-mining occurred relatively smoothly in this streamlining process, and was facilitated by policies promoting side jobs for women who had lost their mining jobs and large-scale efforts by employers to provide welfare and recreation facilities and to unify workers in regional and family groupings. But when the economy was placed on a wartime footing after 1937, labour shortages grew and women began to work in the coal mines once again. The main achievement of this chapter is that it clarifies the distribution and roles of female labour in coal-mining from the industrial revolution to the war years. In particular, it analyses female coal-mine labour for the first time in terms of age, educational level, and number of years of employment, using the 1924 *Rōdō tōkei jitchi chōsa hōkoku* [Report of a Survey on Labour Statistics] by the Cabinet Statistics Bureau, and provides, also for the first time, a comparative analysis of miners characterized as diggers and dressers.

Chapter 3, on female workers of the urban lower class, analyses the changes in the employment structure of urban lower-class female workers in major cities (mainly Tokyo and Osaka) from 1870 to the 1910s, in connection with the advance of industrialization. Research focusing on the urban lower class usually follows the approach either that all of Japanese pre-war society belonged to the lower class or that factory workers employed in large plants rose out of the urban lower class at around the time of the First World War.

Chapter 3, however, attempts to show that the urban lower class had its own dynamic—that is, its composition changed in accordance with industrialization, urbanization, and economic fluctuations, and the employment

structure also changed substantially. From the 1870s and 1880s, during the so-called primitive accumulation stage of capitalism, the employment structure of the urban lower class was at its most varied. Female labour fell into the categories of physical labourer, artisan, miscellaneous labour, and industry. Reflecting the spreading industrialization during the industrial revolution, urban lower-class women engaged in physical labour were absorbed into the match-manufacturing and textile industries. At this time, female labour was low-skilled, low-paid, and overworked.

The most sweeping change in the urban lower class occurred in the boom that accompanied the First World War. In Tokyo, for example, the proportion of the population classified as *saimin* (indigents) dropped from 12.6 per cent in 1911–1912 to 3.4 per cent in 1920. The labour market became a seller's market. Lower-class urban males attained upward mobility by obtaining jobs in large-scale heavy industry plants. After this, urban lower-class male labour was made up mainly of men working in small enterprises. As household head (male) wages rose, the employment rate for wives decreased from 70 per cent in 1911–1912 to 40 per cent in 1921. The size of the urban lower class in which wives' earnings were crucial for survival decreased. But from the latter half of the 1920s, the population in the lower class began to rise again. The number of unemployed rose with the financial panic of 1927 and the depression (the Showa Panic) beginning in late 1929, and these people sank back into the lower class as workers in miscellaneous occupations. The urban lower class subsequently continued to expand and contract, following economic trends. This chapter is significant in that it examines the situation of the urban lower class from the 1870s to the 1920s. However, it was not possible to clarify sufficiently its connection with the topic of this book, technological innovation. We should not forget that one aspect of Japan's modernization was that the process of industrialization constantly renewed the urban lower class. The remark of a Brazilian researcher who heard this paper presented at a regular research meeting highlighted this. He commented that "Japan must be the only country in the world where recycling of discarded goods is a genuine occupation." I suppose that the urban lower class has developed in many different ways, depending on the country or ethnic group.

Chapter 4 examines the relation between technological innovation and female labour after the Second World War in family-run enterprises in agriculture and fisheries. Rapid economic growth after the war led to a sharp decrease in farming and fishing households. It also prompted the exodus of young and mature men to other occupations, and as a result, the proportion of female labour in such family-run enterprises increased. The most important factor behind the higher proportion of female labour was that technological innovation had progressed enough for the work involved to be taken over by women. The effects of technological innovation on labour in agriculture and fisheries, however, were not even. In agriculture, mainly rice cultivation, land improvements (such as reclamation and better irrigation), improved seed types, and mechanized equipment reduced labour require-

ments dramatically, which facilitated the shift in principal agricultural workers from mature males to women and older people. As a result, agriculture has become more female-labour-oriented. The situation is very different in greenhouse horticulture and coastal fisheries. In offshore fisheries especially, fishing boats have become motorized, larger, and faster, and fishing nets are now made of synthetic fibres instead of cotton. These improvements have reduced the intensity of labour as well as increasing catches. This has permitted older men to continue to fish and made limited female participation possible. In laver (*nori*) farming, new methods of propagation, new work procedures at sea, and the use of drying machines have boosted the ratio of female labour. Another salient feature of laver farming is the high ratio of households also involved in agriculture. Advances in laver cultivation techniques, in other words, have had the opposite effect of heightening dependence on agriculture. Diving, conducted by female divers collecting abalone, turban shell (*sazae*), and other shellfish, by contrast, has rejected technological innovation and centuries-old methods continue to be practised. The main feature of this chapter is its focus on patterns of female labour in family-run fishing businesses, which had previously never been examined. The labour of the female members of households engaged in fisheries is largely determined by age, composition of household, development of the labour market, and parallel businesses in which the household is engaged. This chapter elucidates female labour, with these factors in mind, in each type of fishing operation on the basis of plentiful data.

Chapter 5, the last study, focuses on the relationship between technological innovation and female labour in the rapid economic growth period after the end of the Second World War. Female employment grew rapidly during this period, particularly among middle-aged housewives. On the labour supply side, factors responsible for the quick rise in the female labour force included less time required for housework, increased spending on consumer durables, greater attention devoted to leisure and children's education, and the consequent need for supplementary income to meet such expenses, as well as changes in the women's life cycle. On the labour demand side, the shortage of male labour, and mechanization and automation as a result of technological innovation, created more job opportunities for women. The influx of female labour was especially marked in manufacturing, clerical work, services, and sales. A large proportion of labour was employed part-time, for short periods and on a non-regular employee basis. Many housewives worked as part-timers because social conditions made it difficult for them to work as regular employees. It was also more advantageous for employers to hire cheap part-timers who could be let go when they were no longer needed. Many young women took full-time jobs in the electrical and precision machinery industries, but most of the work involved simple unskilled tasks of an auxiliary nature, and only a rare few were employed in positions requiring specialized skills. In the computer industry, the work was monotonous yet demanding, causing considerable work-related fatigue, and the turnover rate was very high.

Disparities in the wages paid to men and women continue. While the rapid economic growth period presented greatly expanded work opportunities for women, the fact that it also gave rise to new types of gender discrimination should not be overlooked. In addition, changes in women's life cycles have produced a situation where women today, unlike their own mothers, have many years of vigorous life left after they finish raising their children. Finding ways of using these years productively is not simply a question concerning middle-aged and older women, but an important issue for all of Japanese society.

II

As stated in the Introduction, the aim of this study on "Technological Innovation and Female Labour" is to summarize the Japanese experience for the benefit of developing countries. However, circumstances in Asian developing countries are, needless to say, quite different from those of the Japanese experience. The urban lower class in these countries is certainly expanding, as it did in Japan during the Meiji years, but technological progress such as that experienced by Japan in its period of rapid economic growth after the Second World War is taking place simultaneously, giving rise to problems never encountered in Japan.

It is common to classify the Asian nations in groups like NIEs (newly industrializing economies), which include the Republic of Korea, Taiwan, Hong Kong, and Singapore, the ASEAN countries (including Malaysia, Thailand, Indonesia, and the Philippines) and the South Asian countries (India, Pakistan, Bangladesh, and Sri Lanka). Degree of industrialization, social structure, and ethnic traditions differ not only between these groups but also between countries in each group. And as far as female labour is concerned, conditions vary vastly. The male labour force, by contrast, follows virtually similar patterns in both the industrialized and the developing countries (fig. 6.1).

Table 6.1 is a compilation of statistics showing percentages of female labour in the 11 Asian countries for which data were available. In some of these countries, the figures themselves are not always reliable and rapid changes in the labour force composition do not necessarily reflect current conditions accurately. However, they do suggest some general features and patterns concerning female labour in Asia.

The first feature notable in these statistics is the many countries with a high birth rate and, consequently, a large population of young people. This is manifested in the index of the dependent population (obtained by dividing the population aged 14 and under and 65 or over by the population aged 15–64). In fact, there are many countries where a large number of children under the age of 15 work. The index shows similar ratios of the dependent population for Pakistan and Thailand, but in Thailand women constitute a very large proportion of the labour force supporting non-working members

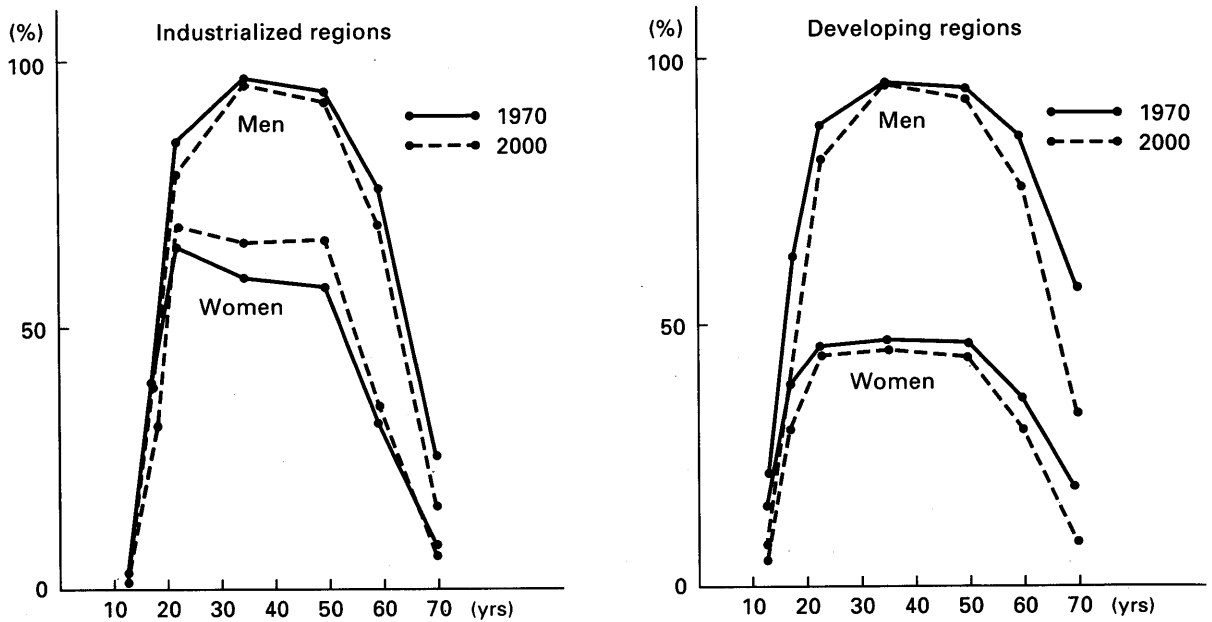


Fig. 6.1. Fluctuations in the Labour Force by Age-group
Note: Figures constitute percentages for workers aged 15 and over.
Source: Sagaza Haruo, "Ajia shokokuno jinkō mondai nyūmon" [Introduction to Population Problems in Asian Countries], *Ajiken nyūsu* [Institute of Developing Economies News], no. 38 (1983), p. 10.

Table 6.1. Composition of the Labour Force in 11 Asian Countries

Country	Dependent population (%)	Working population[a] (% of women aged 15+)	Working pop. by sector[b]			Female workers (aged 15+) (%)	Female workers by sector (%)[b]		
			Primary	Secondary[c]	Tertiary		Primary	Secondary[c]	Tertiary
Pakistan (1984)	95.2	27,740 (11.6)	50.7	18.7	26.4	11.3	36.2[d]	16.9[d]	34.9[d]
India (1981)	85.3	244,604 (26.0)	62.6	12.6	15.8	29.9	57.5	6.6	6.7
Sri Lanka (1980–81)	68.8	5,714 (28.1)	41.7	14.7	24.7	31.3	43.7	12.1	20.5
Indonesia (1980)	79.1	52,153 (33.0)	55.3	13.0	29.9	36.8	52.9	12.8	31.9
Philippines (1978, 1983)	83.3	17,362 (37.0)	49.9[e]	13.2[e]	32.7[e]	46.8	35.9	14.5	42.4
Malaysia (1980)	76.0	4,923 (33.7)	34.4[e]	24.5[e]	35.4[e]	40.1	—[d]	—[d]	—[d]
Singapore (1983)	41.3	1,208 (35.5)	1.0	36.0	62.4	45.7	0.6	36.1	62.5
Hong Kong (1983)	45.7	2,568 (36.3)	1.2	45.4	52.6	48.3	0.9	50.0	48.0

Republic of Korea (1983)	56.8	15,128 (38.5)	28.5	28.0	39.4	42.8	31.9	22.6	43.3
Japan (1983)	47.8	58,890 (39.5)	9.0	33.9	54.2	49.0	11.0	27.6	58.5
Thailand (1980)	96.6	22,728 (47.3)	70.1	10.3	18.7	76.6	73.5	7.7	18.0

a. Calculation of working population is sometimes based on the labour force formula and sometimes on the working persons formula, and varies from country to country, and sometimes for the same country in different years.
b. Some workers do not fall in any of the three sectors, so the percentages for the three sectors do not add up to 100. The same is true for the female working population by sector.
c. Mining, manufacturing, electric, gas, and water supply facilities and construction are included in the secondary sector.
d. Figures for the female working population by sector for Pakistan are for 1981; for Malaysia they are unknown.
e. Figures for total working population by sector for the Philippines are for 1983 and for Malaysia for 1979.

Source: ILO, *Yearbook of Labour Statistics* (1981, 1982, 1983, 1984).

of the population. This indicates that the pressures of the dependent population are mitigated by the high participation of women in the labour force. The dependent population ratio for China, which has implemented a one-child per couple policy, has dropped to 62.6 per cent (1982).[1] Notably, in China as well, approximately half the working population (43.7 per cent)[2] consists of women.

The second feature of the labour force in Asian countries is the large percentage employed in agriculture. With the exception of Singapore and Hong Kong, only in Japan, Taiwan, and the Republic of Korea do less than 30 per cent of the population work in primary industry. Japan's proportion of people employed in the primary sector decreased drastically from the 30 per cent mark after rapid economic growth began in the 1960s. The number of people employed in the primary sector in Asian countries is expected to change; the question remains what the impact of female labour will be. The majority of women employed in agriculture are, as was formerly the case in Japan, workers in family enterprises. As in Japan, the decrease in female agricultural workers led to a decline in the rate of female participation in the labour force. In other words, the decreasing number of farms resulted in the loss of employment for many family employees. In recent years, however, the actual number of women in the working population has been growing, especially for middle-aged and older workers in tertiary industry. Thus, over the long term, although it is affected by shifts in the industrial structure, the female labour force has increased. In China, persons working in farming, animal husbandry, forestry, or fisheries account for 73.7 per cent of all employed persons, and for 78.0 per cent of employed women.[3]

Third, there is a large discrepancy in the rate of female labour in Asian agricultural countries. In Thailand, one in two workers in agriculture is female, whereas in Pakistan the figure is one in ten. As I mentioned above, the ratio of male labour-force participation is high in both industrialized and developing countries, with very few differences among countries (except for the age-group under 19, because of the longer time spent in school in some countries). The female labour participation rate, on the other hand, varies from the 10 per cent to the 70 per cent level. In general, the female labour-force participation rate (proportion of the working population among women aged 15 and over) is high in industrialized countries, with a participation rate of 50 per cent or more in many such countries.[4] The accompanying series of graphs show the female labour participation rate in the female population for every five years of age after 15, and this clearly indicates the trends in each country. Figure 6.2 gives six graphs depicting female labour force participation rate trends by age in 11 Asian countries, ranked in ascending order. Below is a brief explanation of each graph.

I. Pakistan is a country with a very low female labour participation rate. Bangladesh has a similar profile. This type of curve is also observed in the Arab countries of Africa, the Middle East oil-exporting countries, and agricultural Central and South American countries. Restrictions imposed by the Islamic or Catholic religions inhibit women's activity in

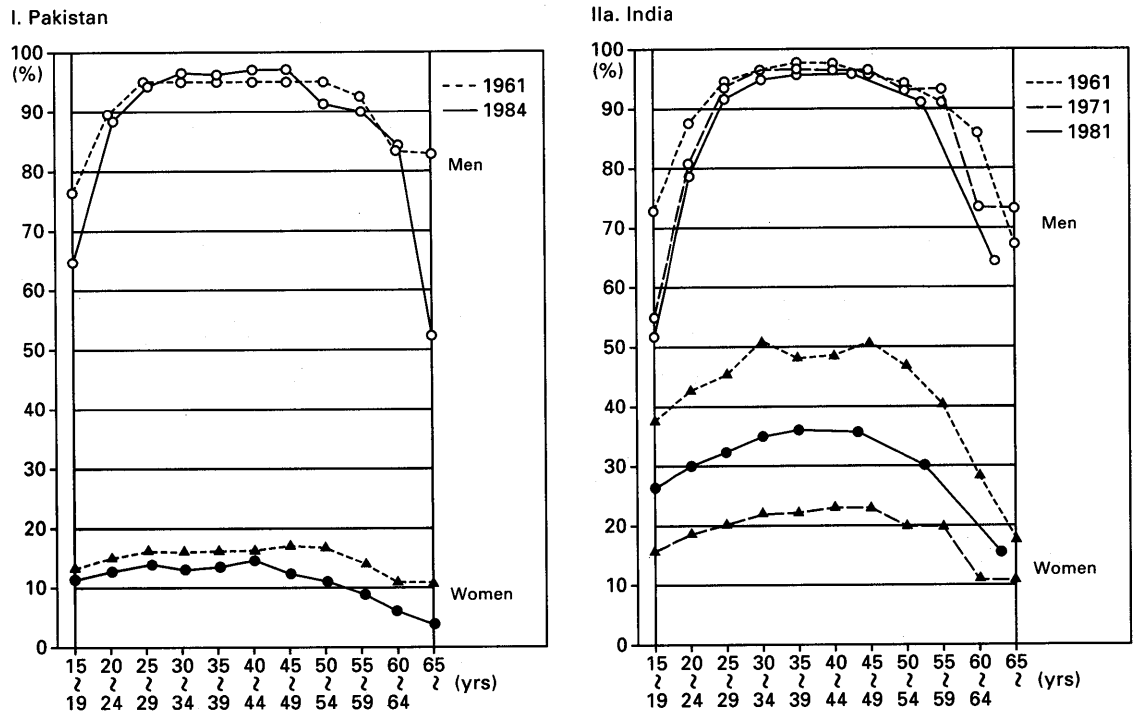
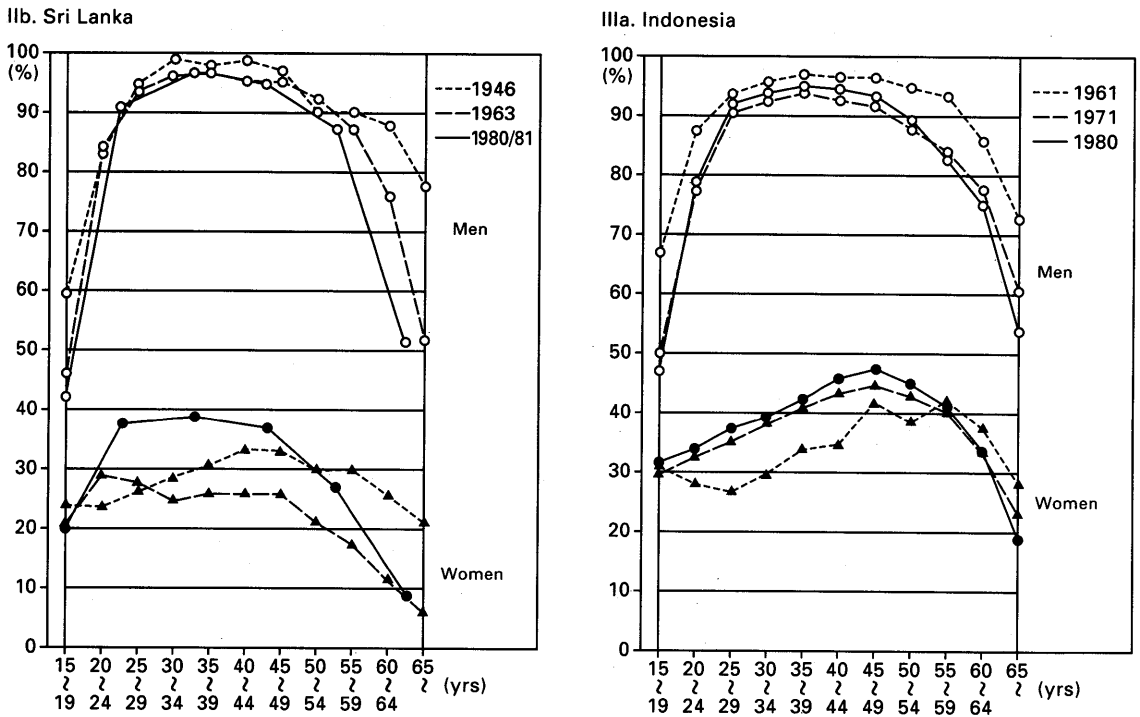


Fig. 6.2. Age-based Labour-participation Rate for 11 Asian Countries
Sources: *Sekai kakkoku jinko keizai katsudō zushū 1950–1970 nen* [Tables of Economic Activity for Individual Countries, 1950–1970], Institute of Developing Economies Statistics Series, vol. 20 (Institute of Developing Economies, 1977); ILO, *Yearbook of Labour Statistics* (1983, 1984).



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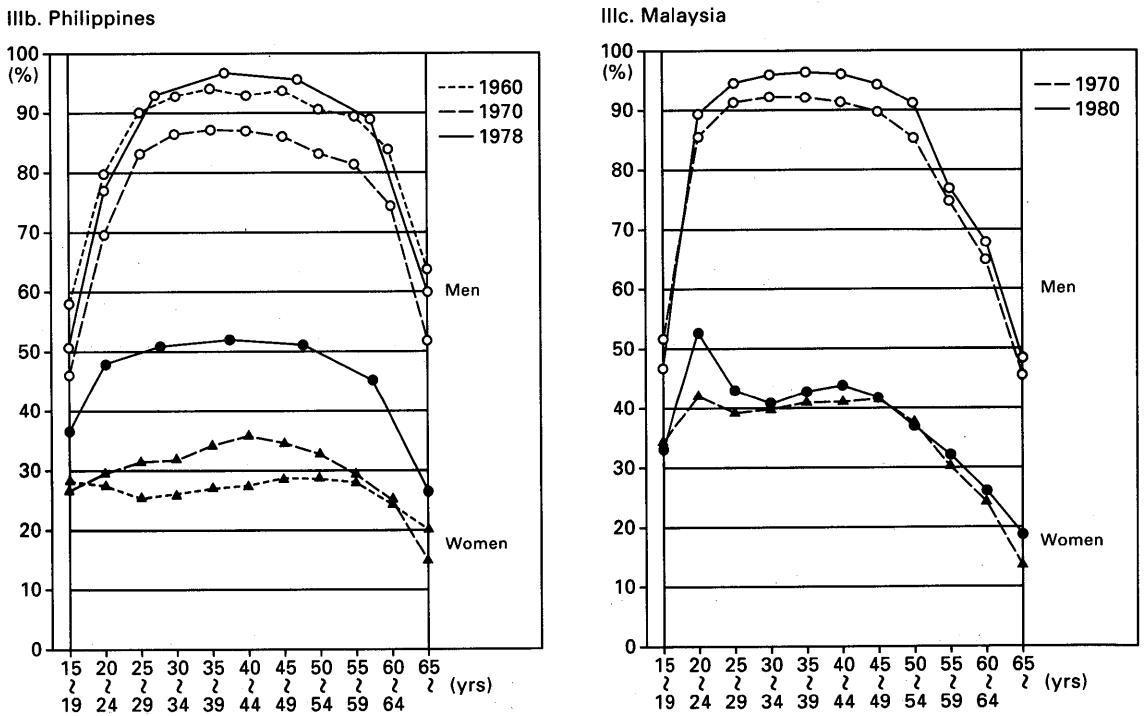

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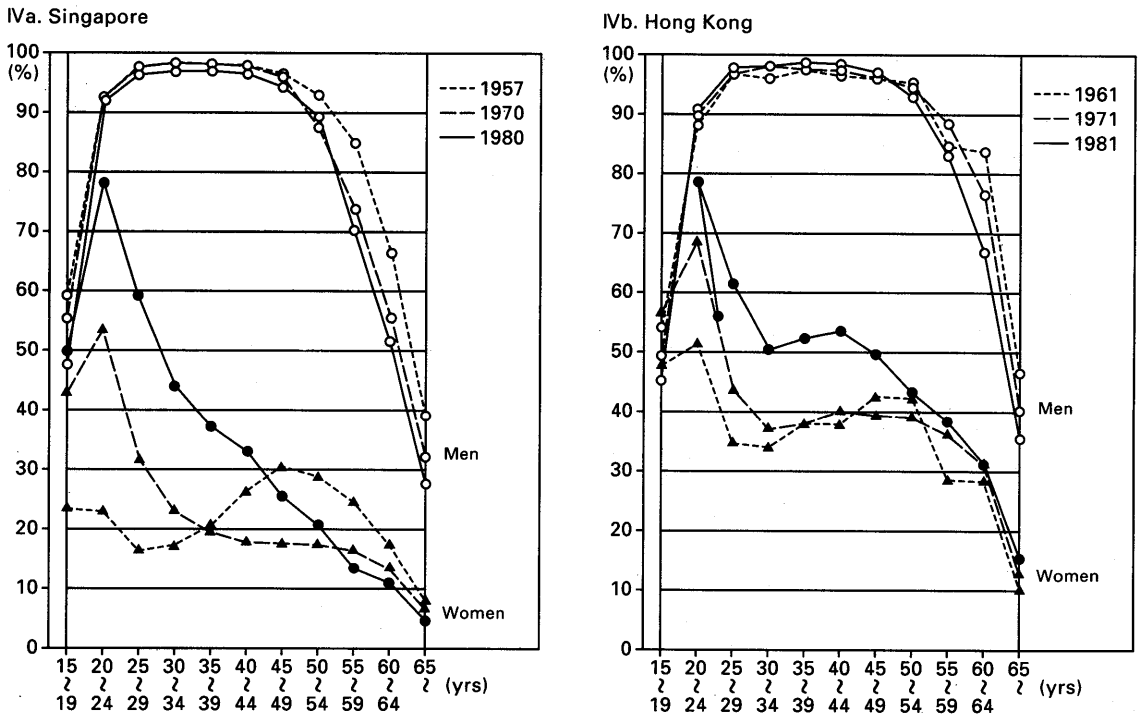

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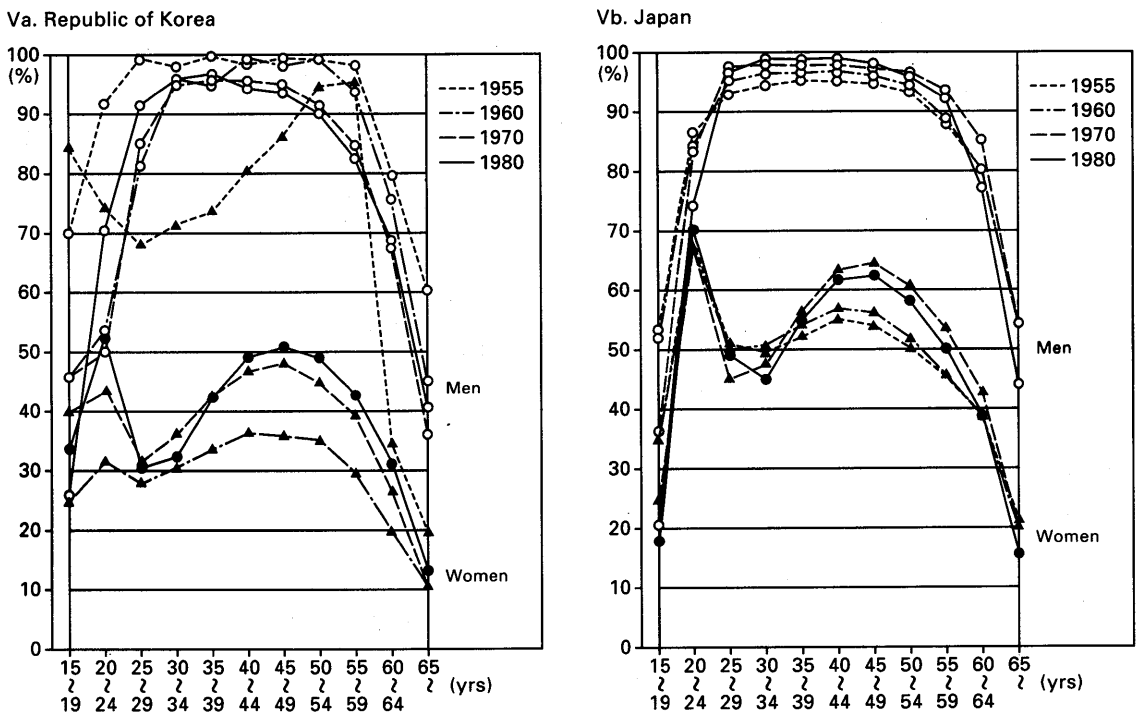

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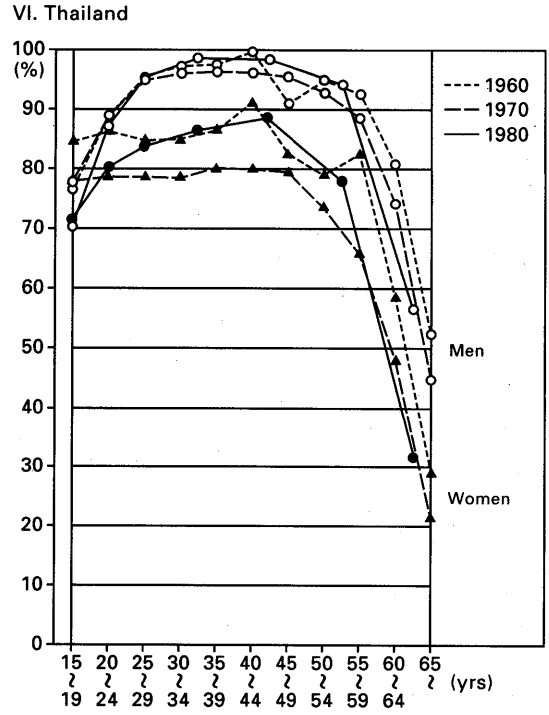

Fig 6.2. (*continued*)

society outside the family, although some Islamic or Catholic countries do have a female labour participation rate of more than 40 per cent. Female labour participation in the above-mentioned countries is likely to rise in the future, along with other changes.

II. In India and Sri Lanka, farming women account for the overwhelming majority of female labour. The gentle curve of female labour participation by age in India exhibits the typical pattern of female employment in agricultural countries. In Sri Lanka, however, the ratio of women in paid employment on plantations is twice that of women working on family farms. The pattern for Sri Lanka is also beginning to change as more young women are employed in manufacturing in export-processing zones.

III. The graph pattern shown by Indonesia, the Philippines, and Malaysia is typical of countries in transition from agriculture to manufacturing. However, the ratio of workers employed in the secondary sector, which is an indicator of industrialization, is still not very high in Indonesia and the Philippines. In Malaysia, there has been a noteworthy influx of young female labour in the home appliance and electronics industries.

IV. In Hong Kong and Singapore, which have small population and a negligible agricultural sector, the curve pattern is atypical. The young age-groups also make up the majority of the female labour, and middle-aged women do not reappear in the labour force after leaving employment for marriage. Hong Kong's pattern, however, has begun to change.

V. The graphs for the Republic of Korea and Japan exhibit a typical M-curve peaking in the young and middle-aged age-groups. This is a pattern also seen in the United Kingdom and other Western countries. Sweden had an M-curve graph in the 1970s.[5] The Sagaza paper,[6] which forecasts Asian countries' labour participation rate up to 2025 on the basis of Japanese and Korean models, concludes that India, Sri Lanka, Indonesia, the Philippines, Malaysia, and Thailand will all show M-curve patterns by that time. Only the future will tell whether the M-curve will become the typical pattern for female labour-force participation.

VI. Thailand has an extremely high female labour-participation rate among Asian countries. In that sense, its curve pattern is very similar to that of Sweden, where female labour participation (74.1 per cent in 1981[7]) is also very high. As figure 6.3 shows, except for the discrepancy generated by differences in the ratio of young people still in school, it is almost impossible to tell which curve belongs to which country. But over 70 per cent of Thai women work in agriculture, and of these 80 per cent are family workers. By contrast, 80 per cent of female labour in Sweden is employed in the tertiary sector, and over 90 per cent of all female workers are paid employees, a graphic illustration of the extremes in the conditions of female labour in these two countries. Other developing countries with high female labour-participation rates include the African nations of Rwanda, Burundi, and Tanzania. China also has a high female labour-participation rate, estimated at 70 per cent in 1982.[8]

The fourth characteristic is that female workers tend to be concentrated in the tertiary sector. In the industrialized countries, including Japan, this has become the established trend, but female labour is flowing not so much into the secondary as into the tertiary sector in some developing countries. This is indicative of the low employment absorption capacity of secondary industry in these countries. In South Asian countries, for example, the proportion of female labour is low in certain specific sectors like textiles. In other words, even the textile industry, perceived as a preserve of female labour in many countries, is a male domain in these countries. Accordingly, the condition of female workers differs not only between industrialized and developing countries, but among developing countries themselves.

In the foregoing, I divided female labour in Asian countries into six patterns according to the labour participation rate. These patterns can be said to reflect the stage of development of the labour market, employment opportunities for women (or lack thereof), and the interchangeability of

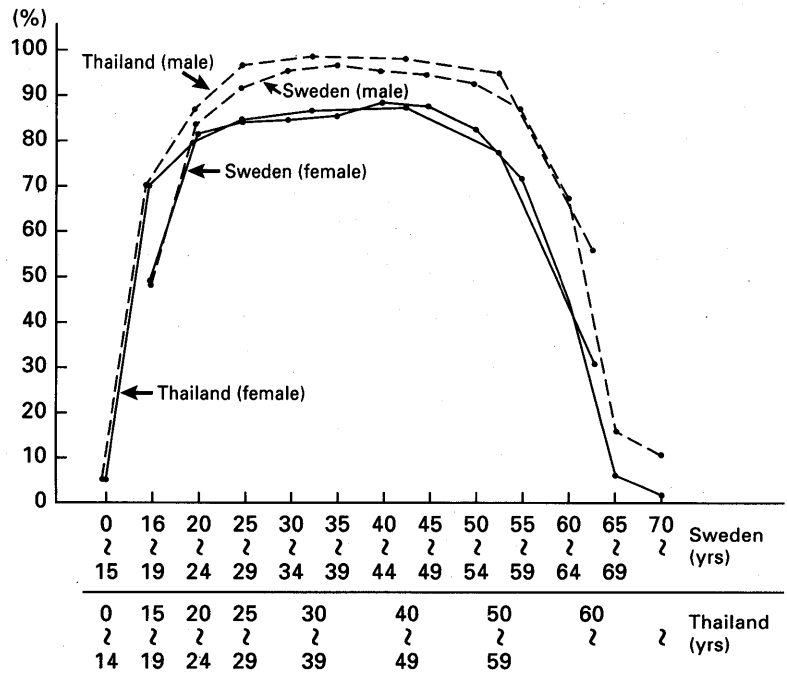

Fig. 6.3. Age-based Labour-force Participation Rate for Sweden (1982) and Thailand (1980)
Source: Graph based on ILO, *Yearbook of Labour Statistics* (1983).

male and female labour. But when factors such as rate of wage increase after hiring, pace of promotion, ratio of the population in school before employment, and type of education received are considered, these classifications could differ more. For example, in a great number of countries, differences in education dictate employment conditions for women. In India, some women with a high-school education occupy management-level positions in the national or state bureaucracies or private enterprises, and while they are paid less and advance less rapidly than their male counterparts, the gender gap is not particularly great. On the other hand, women with only meagre education are forced to work in harsh, unstable conditions as agricultural or construction labourers or as live-in domestics in the cities. This extreme divergence between the upper and lower ends of the social spectrum is also seen in Bangladesh, the Philippines, and Malaysia, and it is also possible to classify the patterns in this way. Therefore, the six classifications I set out above are merely one example. Keeping this in mind, obviously it

is no simple matter to apply "the Japanese experience" in pursuing the advancement of society in the developing countries.

In Japan's case, with a few exceptions, technological innovation generally played the role of creating employment opportunities for female labour. That is, technological innovation and the increase in the proportion of female labour followed roughly parallel lines. But conditions differed greatly before and after the Second World War. In pre-war times, female labour in silk-reeling or coal mines was symbolic of the low wages earned in harsh conditions, which were endured to supplement family income. Employers were reluctant to adopt technological innovations as long as there was an abundant supply of docile, inexpensive labour. But in the post-war years, land and labour reforms were enacted and women began to receive more education, so the harsh working conditions of the "pitiful female worker" basically disappeared. In the latter half of the 1960s, when labour shortages began to appear, employment opportunities for women suddenly grew. Technological innovation and automation in the electrical and precision equipment industries made it possible for female labour to replace male labour, and these industries absorbed large quantities of young female workers. The industrial structure changes as a result of technological innovation as well, and as the larger proportion of workers has shifted steadily from primary to secondary and from secondary to tertiary industry (with over 50 per cent of the labour force in Japan in tertiary industry in the 1970s), more and more women have been employed in clerical, service, and sales jobs. The M-curve employment structure mentioned above could not have occurred without this shift in the industrial structure. Rapid economic growth fundamentally changed female labour, and female employed workers have become a major factor affecting Japan's employment structure.

More or less similar trends in female labour are found in the Republic of Korea, Taiwan, Hong Kong, Singapore, and other Asian NIEs. As industrialization progresses, these countries will probably face the problems that Japan did. In fact, some of them already have. On the other hand, in South-East and South Asian countries, where female labour constitutes over 50 per cent of the agricultural workforce, the future of female labour will be greatly affected not only by industrial progress but by land reform and changes in agricultural technology. Japan's post-war experience, particularly where land, labour, and educational reforms are concerned, bears this out.

In any case, this is the point that made us very aware, in preparing this book, that much broader-ranging interdisciplinary research will have to be undertaken before the findings of this study can be repositioned from the viewpoint of Japan as part of Asia. The United Nations University and the Institute of Developing Economies are the most appropriate organizers of such interdisciplinary research. It is my hope that the publication of this book will provide the impetus for organizing joint research that goes beyond a specialist framework.

Notes

1. *Chugoku Sōran* [General Survey of China] (Government of China, Beijing, 1984), p. 298.
2. Ibid., p. 305.
3. Calculated from *Chugoku sōran*.
4. The following paper deals in detail with female labour in industrialized countries: Kanekiyo Hiroyuki and Hayase Yasuko, "Joshi no rōdōryoku sanka to koyō, shitsugyō mondai" [Female Labour-force Participation and Issues in Hiring and Unemployment], in Minami Ryōzaburō and Mizuno Asao, eds., *Senshin kōgyōkoku no koyō to shitsugyō* [Hiring and Unemployment in Industrialized Countries] (Chikura Shobō, Tokyo, 1985).
5. Ibid., p. 99.
6. Sagaza Haruo, "Labour Force Projection for Asian Countries, 1980–2025," in Ōtomo Atsushi, Sagaza Haruo, and Hayase Yasuko, eds., *Hattentojōkoku jinkō no shōrai dōkō: kōzō to dōtai* [Structure and Dynamics of Future Population Trends in Developing Countries] (Institute of Developing Economies, 1985). The Sagaza paper makes projections based on urbanization and labour-force participation rates in Japan and the Republic of Korea. The results, as this paper also indicates, are that the M-curve pattern is likely to have a strong effect.
7. Kanekiyo and Hayase "Joshi no rōdōryoku sanka to koyō, shitsugyō mondai," p. 96.
8. Calculated from *Chūgoku tōkei nenkan* [Yearbook of Chinese Statistics] (1984), pp. 97, 102.