

***Economic Dynamism and  
Structural Transformation  
in the Asian Pacific Rim Countries  
— Contributions of the Second Sex***

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## A B S T R A C T

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It is the contention of this paper that women have played a significant role in the economic dynamism and structural transformation of the Asian Pacific Rim countries in the post-Second World War period. Female participation has made available not only an endless supply at low cost, but also the unique human resource qualities that have represented key ingredients in the economic success of these countries. The sectors that have been the engines of growth in these economies have been the sectors with female-dominant workforces, with female employment growing faster than that of males in the 1960s and 1970s. The paper examines the distinct role of women in the dynamics of economic structural transformation, stressing that the propensity and capability of women to respond to changing opportunity structures in different sectors of the economy have been important. The Asian Pacific Rim experience has been unusual in that, compared to other regions, there has been a lack of institutional and socio-cultural barriers to female labor force participation while demographic and education patterns have ensured that there is a supply of qualified female labor. But the paper stresses that even in their economic roles, women remain the second sex, in many cases exploited for their "feminine", traditional subservient, malleable qualities, far from equal to their male counterparts and often additionally burdened by formal entry into the labor force without any change in their familial roles nor any increase in their status.

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## I. Introduction

The post Second World War period has been one of phenomenal transformation for the countries along the Asian Pacific Rim--with unprecedented economic and technological growth, significant structural shifts in their economies away from agriculture into modern industry and services, dramatic demographic change with rapid declines in fertility and large-scale rural-urban migration, and wide-ranging social change affecting the basic institution of the family, moral values, cultural traditions, etc. Japan, the Republic of Korea, Hong Kong, Taiwan and Singapore demonstrated impressive economic growth followed by the other ASEAN countries of Malaysia, Thailand, Philippines and Indonesia. Together, these countries shared a sustained economic growth rate in the 1960s and 1970s that was the wonder of most of the world.

To understand this unusually rapid transformation, the contributions of women cannot be ignored. This paper seeks to document the nature and magnitude of the role of women in the economic transition of these countries, a role which is still evolving. The need to focus specifically on women arises because the contributions they make are different from those of men, due not only to their multiple functions at home and in the market place, but also to the specific characteristics associated with their sex. The importance of women's economic roles is not only because they represent a significant resource of under-utilized labor in the non-household sector, but also because women's activities are intimately tied to the structure of the family in society. The combination of women's roles in production, reproduction and nurturing is pivotal in the broad transition that links economic and demographic change.

It is partly because of this multiplicity of roles assigned to women that their contributions to economic dynamism and change tend to be down-played or under-valued; and even in their economic roles, they remain the second sex, in many cases exploited for their "feminine" qualities, far from equal to their male counterparts not only in terms of remuneration for work but also in terms of control over resources. Their contributions are often shrouded in a "veil of invisibility" (Blumberg, 1979) and their already heavy burdens doubled or trebled by formal entry into the labor force without any change in their familial

roles or an increase in their status.

The first section of this paper examines female labor force participation trends and the relationship with economic growth and structural transformation in the Asian Pacific Rim countries. In the second section, explanations are suggested for the distinct influence of women in the dynamics of economic structural transformation. It is the contention of this paper that female participation has made available not only the endless supply of female labor at low cost, but also the unique human resource qualities that have represented key ingredients in the economic success of these countries. The propensity and capability of women to respond to changing opportunity structures in different sectors of the economy are crucial considerations. The third section draws attention to the dynamic interlinkages of the economic, demographic and sociological changes that reflect the evolving relationship between the female labor force and structural transformation in these countries. Women have been both movers and objects of the broad demographic and socio-economic changes affecting the quantity and quality of human resources. The approach adopted by this paper makes it evident that the contributions women have made to the economic growth of these countries have been restricted by the labor market, other institutional factors and by the persistence of cultural constraints and prejudices. Compared to men, women are more affected by distortions in factor and product markets and they remain more vulnerable to economic vagaries. The final section identifies some issues for detailed analysis and further research.

## II. Trends in Female Participation, Economic Growth and Structural Change

The conventional hypothesis is that labor force participation of women increases in the course of a country's socio-economic development. This hypothesis is largely informed by the historical experience of a number of industrialized countries. The upward trend in female participation rates has been conspicuous in such countries as the United States, the United Kingdom, Australia and the Federal Republic of Germany, although not in a linear or even continuous pattern. The hypothesis also received some support from cross-sectional studies

that compared the more and less developed countries (see, for example, Collver and Langlois, 1962; Khoo, 1987; International Labour Office, 1980; Lim, 1986; Sivard, 1985).

Khoo's (1987) study (based on data shown in Table 2 of this paper) found a large increase in female participation rates in the modern sectors from the agricultural countries to the newly industrializing countries, and from the newly industrializing countries to the newly industrialized economies, but a smaller increase from the newly industrialized economies to the industrialized countries. "This pattern suggests that both demand for and supply of female labor increase considerably during industrialization and development, and that women play an important role in these processes" (Khoo, 1987: 29).

A somewhat different hypothesis is that in the course of economic growth and structural change, female participation follows a U-shaped pattern, declining in the early stages of industrialization and only increasing later due to the relative growth of the modern non-agricultural sector (Singha, 1967; Durand, 1975). Durand's (1975) major comparative study based on cross-sectional data of a hundred countries at different levels of development gave credence to the U-shaped pattern. But in the same study, Durand found that longitudinal data from fifty-eight countries yielded a mixture of rising and falling trends of female participation. Durand himself (1975: 150) cautioned that:

the U-shaped pattern of cross-sectional average levels of these rates reflects, at least in part, influences of extraneous factors unrelated to economic development, as well as errors and biases in the measures. There is some reason for expecting, however, that in the future, as traditions about female and male social roles are modified, women may generally take an increasing part in the labor force in countries at the higher levels of economic development.

Various other studies attempting to unravel the relationship between female participation and economic growth performance have emphasized the inconclusiveness of results, "not least because any relationship based on aggregate cross-national data is liable to

involve serious errors of misaggregation" (Standing, 1981: 14; see also Anker and Hein, 1985; Khoo, 1987). Apart from the problems of data biases and under-reporting which more seriously affect measures of female than of the male labor force, the extent and nature of female involvement in the economy would hinge upon the point in time or the time period for which data are available for analysis; whether it is the overall participation rates in the economy or the sectoral rates that are considered; the economic roles of women in the agricultural and non-agricultural sectors in the early stages of economic growth as well as the effect of the increasing relative share of non-agricultural employment in the total; the degree to which male workers substitute for female workers within sectors and occupations, and the degree to which female workers are substituted for male.

Cross-national data for the Asian countries shown in Table 1 appear to lend some support to the U-curve hypothesis, with economy-wide participation rates higher at both ends of the development spectrum and lower in the middle income range of countries. Of course, even among the Asian countries there are important inter-country differences in female participation reflecting not only economic but also demographic and cultural differences. In Thailand, the high level of female participation reflects the country's distinctive cultural tradition of relative sexual equality; while in Pakistan, low visible female employment is explainable in terms of feminine seclusion under Islam.

In terms of the relationship between the level of female participation in the economy and the rate of economic growth defined as the annual growth rate of GDP, it was obvious that the Asian Pacific Rim countries exhibited higher economic growth rates than other Asian countries, especially in the 1960s and early 1970s, and they also tended to be those with more rapid change in female participation over the years. The exceptions were countries like Japan, Hong Kong and Thailand where female participation rates were already high at the start of the periods examined. While the overall participation rates may have fallen in these countries, Table 2 shows that the fall was most likely due to the decline in agricultural work or in family enterprises, traditional handicraft manufacturing, domestic service and other fields which normally contract as economic development goes forward. In Table 2, for the periods shown, Japan, Hong Kong and

Table 1. Per Capita GNP, GDP Growth Rates and Female Participation Rates

Country	Per capita GNP US\$ 1980	GDP Annual Growth Rate % 1960-70	Annual Growth Rate % 1970-80	Female Participation Rates*				
				1960	1975	% Change 1960- 1975	1980	% Change 1975- 1980
Japan	9,890	10.9	5.0	50.1	50.9	+ 1.6	47	- 9.2
Singapore	4,430	8.8	8.5	21.6	30.2	+39.8	32	+ 6.0
Hong Kong	4,240	10.0	9.3	41.0	43.3	+ 5.3	49	+13.2
S. Korea	1,520	8.6	9.5	27.9	37.8	+35.5	40	+ 5.8
W.Malaysia	1,620	6.5	7.8	29.8	36.6	+22.8	38	+ 3.8
Philippines	690	5.1	6.3	27.2	40.3	+48.1	41	+ 1.7
Thailand	670	8.4	7.2	81.3	71.5	-12.0	73	+ 2.1
Indonesia	430	3.9	7.6	31.0	33.6	+ 8.3	33	- 1.8
Pakistan	300	6.7	4.7	..	9.7	..	11	+13.4
China	290	5.2	5.8	..	53.0	..	55	+ 3.8
Sri Lanka	270	4.6	4.1	23.6	27.5	+16.5	29	+ 5.5
India	240	3.4	3.6	42.8	40.9	- 4.4	41	+ 0.2
Nepal	140	2.5	2.5	59.4	58.1	- 2.1	60	+ 3.3

\* Participation rates for women 15 years and over.

Sources: The World Bank, World Development Report 1982, Tables 1 and 2; International Center for Research on Women 1980, "Keeping Women Out: A Structural Analysis of Women's Employment in Developing Countries", Table 1; Sivard, R.L. 1985, Women: A World Survey, Table 1.

Table 2. Women's Economic Participation Rates

	Years	All Sectors	Participation Rates Non-Agricultural Sectors	Manufacturing Sectors
<b>Large Agricultural Countries</b>				
Bangladesh	1974	3.4	0.9	0.1
China	1982	76.5	16.8	9.1
India	1971	18.6	3.2	1.3
	1981	29.9	12.7	1.7
Indonesia	1971	35.6	14.3	3.8
	1980	36.8	17.3	4.5
Nepal	1971	34.3	0.6	0.2
	1981	45.2	1.9	0.1
<b>Newly Industrializing Countries</b>				
Malaysia	1957	29.9	4.2	0.7
	1970	35.6	18.0	2.8
	1980	42.2 *	17.8 *	3.9 *
Philippines	1970	34.1	23.4	6.1
	1975	40.3	26.3	5.7
Sri Lanka	1971	30.7	17.4	2.6
Thailand	1970	76.8	12.8	3.0
	1980	74.4	19.0	4.2
<b>Newly Industrialized Economies</b>				
Hong Kong	1971	42.8	41.1	24.5
	1976	45.4	44.3	26.3
	1981	49.2	48.6	26.1
Republic of Korea	1966	31.6	13.2	3.8
	1970	38.4	18.0	4.8
	1975	46.7	20.3	7.5
	1980	39.5	22.4	8.0
Singapore	1975	30.2	29.5	11.5
	1983	45.7	45.4	15.5
Taiwan	1972	39.9	20.1	8.3
	1976	44.2	28.0	12.4
	1981	48.1	34.1	16.1
<b>Industrialized Countries</b>				
Australia	1971	37.1	35.6	7.0
	1976	43.0	41.3	6.9
	1983	44.0	42.2	4.4
Japan	1960	50.1	28.6	9.1
	1970	50.9	37.7	11.9
	1980	46.9	41.7	11.2
New Zealand	1971	33.8	32.0	7.5
	1976	36.6	34.5	7.4
	1981	38.6	35.9	7.2

Rates are for females aged 15 years and over.

\* Figures taken from 1980 Population Census, Malaysia.

Source: Khoo, 1987:Table 1.2.

Thailand all recorded rising levels of female participation in the modern non-agricultural sectors. It was only in the manufacturing sector that Japan showed a slight decline in female participation in the 1970s, as Japanese businesses changed their employment strategies in line with the transition from the high growth period to the slower growth period in the mid-1970s (Ogawa, 1987: 309).

The data in Table 1 refer to overall female participation in the economy, but what is more important for understanding economic dynamism is the distribution of women workers in different sectors of the economy and the relative rates of sectoral growth. Table 2 shows a clearly positive correlation between female participation in the non-agricultural sector and the level of industrialization. Based on the data shown in Table 2, Khoo (1987: 28) obtained high and positive correlations between the female participation rate in the non-agricultural sector and per capita GDP and the contributions of the manufacturing and service sectors to GDP. Khoo also found that the female participation rate in the non-agricultural sector rises with economic growth until per capita GDP reaches about US\$5,000, after which it appears to level off at around 40-45 percent. In Table 2, the female participation rate in the modern sectors has not risen above 50 percent in any of the Asian Pacific Rim countries. It appears that once industrialization is achieved, there is a levelling off of female participation rates as "social and institutional factors become more important determinants of female economic participation and these factors change more slowly" (Khoo, 1987: 29).

Table 3, although plagued by data comparability problems because of differences in years for which the various sets of information were available, does indicate that in terms of the trends over time, increase in female participation in the modern non-agricultural sectors was more rapid than the increase in their overall participation rates. In fact, in the countries under discussion, women's employment in non-agricultural activities has by and large been increasing more rapidly than that of men, although the trends have differed by sector (see Jones, 1984: 42).

Table 4 shows growth of female employment in manufacturing, trade and services compared with trends in male employment in the 1970s. In manufacturing, female employment grew substantially faster than that of males in all countries except Korea, the Philippines and Indonesia.

Table 3. Sectoral Shares in Economic Growth and Changes in Female Participation

Country	Average Annual Growth Rates								Average Annual Change in				
	Agriculture		Industry*		Manufacturing		Services		Total Labour Force	Female Participation**			
	1960-1970	1970-1980	1960-1970	1970-1980	1960-1970	1970-1980	1960-1970	1970-1980	1960-1970	1970-1980	All Sectors	Non-Agric.	Manufacturing
Large Agricultural Countries:													
India	1.9	1.9	5.4	4.5	4.7	5.0	4.6	5.2	1.5	1.7	4.9	14.8 (1971-81)	2.7
Indonesia	2.7	3.8	5.2	11.1	3.3	12.8	4.8	9.2	1.7	2.1	0.4	2.1 (1971-80)	1.9
Nepal	..	0.5	..	..	..	..	..	..	1.5	2.0	2.8	12.2 (1971-81)	-0.7
Newly Industrializing Countries:													
Malaysia	..	5.1	..	9.7	..	11.8	..	8.2	2.8	3.0	1.5	5.5 (1957-80)	7.8
Philippines	4.3	4.9	6.0	8.7	6.7	7.2	5.2	5.4	2.2	2.4	3.4	2.4 (1970-75)	-1.4
Thailand	5.6	4.7	11.9	10.0	11.4	10.6	9.1	7.3	2.0	2.9	-0.3	4.0 (1970-80)	3.4
Newly Industrialized Economies:													
Hong Kong	..	-4.6	..	..	..	9.3	..	..	3.2	3.0	1.4	1.7 (1971-81)	0.6
S.Korea	4.4	3.2	17.2	15.4	17.6	16.6	8.9	8.5	3.0	2.8	1.6	3.8 (1966-80)	5.5
Singapore	5.0	1.8	12.5	8.8	13.0	9.6	7.7	8.5	2.8	2.7	5.3	5.5 (1975-83)	3.8
Industrialized Countries:													
Japan	4.0	1.1	10.9	5.5	11.0	6.4	11.7	5.5	1.9	1.3	-0.6	3.2 (1960-80)	1.7
Australia	2.0	2.5	5.9	1.6	5.5	1.5	4.0	4.1	2.6	1.8	1.4	1.4 (1971-83)	-3.9

\* Industry comprises mining, manufacturing, construction and utilities

\*\* Average annual change of participation rates for females aged 15 and over calculated from Table 2.

Source for GDP and labor force figures: The World Bank, World Development Report 1982.

Table 4. Relative Growth of Female and Male Employment in Manufacturing, Trade and Services, 1970s

Country	Manufacturing		% of total female employt. in non-agric.		Trade		Ratio Female/Male Growth		% of total female employt. in non-agric.		Services		Ratio Female/Male Growth		% of total female employt. in non-agric.	
	Average Male Employment	Annual Female Growth	Ratio Male/Female	% of total female employt. in non-agric.	Average Male Employment	Annual Female Growth	Ratio Male/Female	% of total female employt. in non-agric.	Average Male Employment	Annual Female Growth	Ratio Male/Female	% of total female employt. in non-agric.	Average Male Employment	Annual Female Growth	Ratio Male/Female	% of total female employt. in non-agric.
Republic of Korea (1970-80)	6.8	6.9	1.0	40.8	4.3	5.7	1.3	34.4	1.3	1.6	1.2	16.6				
Taiwan (1970-80)	9.9	16.2	1.6	48.1	4.6	13.6	2.9	19.0	1.5	8.2	5.3	27.3				
Hong Kong (1971-81)	3.2	4.4	1.4	54.1	9.3	13.7	1.5	22.4	1.1	2.6	2.4	18.1				
Singapore (1970-80)	6.1	11.4	1.9	40.8	2.0	10.0	5.0	21.4	3.4	5.7	1.7	30.9				
Malaysia (1970-79)	11.0	16.6	1.5	35.4	7.3	14.5	2.0	20.6	3.3	9.6	2.9	39.1				
Thailand (1970-76)	10.9	16.0	1.5	35.2	8.3	7.0	0.8	33.4	2.5	5.1	2.0	27.1				
Philippines (1970-80)	2.8	-2.8	..	21.2	2.4	0.9	0.4	19.3	4.6	3.7	0.8	57.4				
Indonesia (1971-80)	5.5	5.3	1.0	24.1	4.1	5.8	1.4	41.1	6.4	8.7	1.4	32.2				

Source: Jones, G.W. 1984, Table 2.10.

In trade and services, growth of female employment outstripped that of males in all countries except the Philippines.

In Table 3, the rate of increase in female participation in manufacturing was shown as faster in the newly industrializing and newly industrialized countries than in those countries at the two ends of the development spectrum, and in the two former groups of countries manufacturing was the most dynamic sector, although in terms of overall contribution to output and employment, there were some differences among the countries. In Table 5, it is shown that manufacturing's share of total female employment rose substantially in Singapore, Peninsular Malaysia and Korea.

Several writers (Jones, 1984: 42-43; Khoo, 1987: 30) have pointed out, and it is confirmed in Table 6, that female participation in the manufacturing sector has been higher in East and Southeast Asia than it tends to be in the Western countries, and substantially higher than it is in the South Asian/Muslim and Latin American countries. The statistical model tested by Khoo (1987: 30) found that even after controlling for education and demographic variables, the female participation rate in manufacturing in East Asia remained significantly higher than that in other countries with the same level of per capita GDP. Female activities in the manufacturing sector differed, however. In Indonesia, the high female concentration was due to the importance of handicrafts, whereas in Hong Kong and Taiwan, the women workers were mainly in textiles and electronics. In Malaysia too, electronics has been important. But in Korea, while the textile industry remained relatively important, there have been shifts to heavy industry which is male-intensive. In Singapore, too there has been a shift so that technology-intensive industries are now substituting low-skill, labor-intensive ones.

The services sector has also been a major source of GDP growth, as evident from Table 3. From Table 5, it is clear that the female share of total employment has been disproportionately high in community, social and personal services in all countries, but in financial and business services, females were important only in the more developed countries of Japan, Singapore, Australia and New Zealand. In line with their high concentration in these services, a large number and proportion of women workers are found in "the feminine professions" such as teaching, nursing, and social work, and

clerical work (particularly in financial and business services and in the government). "This pattern reflects both the structural transformation that countries undergo in the process of economic development, and the tendency for many occupations and industries in all countries, developed and developing, to be segregated by sex" (Lim, 1986: 16).

On the other hand, domestic service which was a major occupation for women has been declining rapidly in importance in recent years in Singapore, Taiwan and Korea. Collver and Langlois (1962: 372-374) see female involvement in private domestic service declining as a reaction to the process of modernization and increase in wage levels. In the case of the Asian Pacific Rim countries, though, it must be noted that the phenomenon of international female migration for domestic work overseas has been important in recent years. Filipino and Thai women in particular have been involved in major streams to countries such as Hong Kong and Singapore and more recently Malaysia, and their effect in "freeing" women in these countries for other types of occupational mobility is a topic worth investigating. For the sending countries, the remittances of these female migrants working not only as maids, but also in nursing and the hospitality services represent an increasingly important source of foreign exchange earnings.

Women in the service sector in all these countries include large numbers working in hospitality services, the entertainment business, hotels and restaurants with tourism increasingly promoted as a major source of foreign exchange earnings. Other studies have also suggested that prostitution-related occupations provide a substantial, if not major, share of female employment in cities of these countries. Although figures are difficult to come by, one estimate is that 7 to 9 percent of female employment in Bangkok and Manila is in prostitution-related occupations (Jones, 1984: 57; see also Phongpaichit, 1984). There has also been the export of women overseas, or what has been termed "the sexploitation of Asians by Asians". Although Japan was the chief early victim of the flesh trade (the Karayuki-san), post-war prosperity in Japan has been pulling in girls first from South Korea and Taiwan, later from Thailand and now the Philippines. Government and church officials estimate that 28,000 Filipino girls are presently working as so-called entertainers in Japan (see Asia Magazine, September 6, 1987, p. 14).

Table 5 also presents another picture of changing female.

Table 5. Female Participation In Industry (Percentage)

Country or area and year		Agri- culture	Mining	Manufac- turing	Utili- ties	Con- struc- tion	Trade*	Transport & commu- nications	Finan- cial & business services	Community social & personal services	n.e.c **	Not em- ployed	
Australia													
1971	M and F	7.2	1.4	22.9	1.7	7.7	20.7	7.0	6.8	18.8	4.1	1.7	10
	Total F	4.0	0.3	18.5	1.2	0.4	27.2	3.5	9.3	29.3	4.0	2.2	10
	F share	17.6	7.9	25.7	4.9	8.8	41.7	15.5	43.5	49.5	31.3	41.0	3
1983	M and F	6.5	1.6	18.6	2.1	7.1	1.7	7.7	8.5	26.3	-	1.9	10
	Total F	4.2	0.4	12.4	0.6	1.8	23.7	3.5	10.5	40.2	-	2.7	10
	F share	23.9	8.2	24.4	9.6	9.5	43.9	17.0	45.2	55.9	-	51.5	3
Hong Kong													
1971	M and F	3.9	0.3	46.1	0.5	5.2	15.6	7.2	2.5	14.4	2.8	1.5	10
	Total F	4.0	0.2	57.2	0.1	1.1	10.9	1.6	1.9	17.5	3.2	2.1	10
	F share	34.8	24.8	41.7	8.4	7.0	23.6	7.6	25.4	41.2	38.3	50.0	3
1982	M and F	1.9	0.1	40.9	0.6	7.9	19.0	7.6	4.7	15.2	1.4	0.7	10
	Total F	1.3	-	48.4	-	1.3	18.9	2.8	5.9	20.0	-	1.2	10
	F share	35.3	-	47.4	5.7	5.2	31.6	12.1	41.1	40.3	50.0	47.8	3
Indonesia													
1971	M and F	62.2	0.2	7.4	0.1	1.9	10.4	2.3	0.2	9.9	4.4	1.0	10
	Total F	59.9	-	10.7	-	-	13.6	0.1	0.1	8.1	6.5	0.8	10
	F share	31.8	6.5	48.1	5.3	1.3	43.3	1.9	17.2	27.0	49.3	26.5	1
1980	M and F	55.3	0.7	9.0	0.1	3.2	12.8	2.8	0.6	13.7	0.1	1.7	10
	Total F	52.9	0.3	12.2	-	0.2	18.6	0.1	0.3	12.9	-	2.3	10
	F share	31.6	15.5	44.8	9.0	2.4	47.9	1.5	16.9	31.0	23.7	45.1	3
Japan													
1970	M and F	19.1	0.4	25.6	0.5	7.5	19.9	6.1	4.1	15.4	-	1.4	10
	Total F	25.9	0.1	23.4	0.2	2.1	23.7	2.0	4.1	17.4	-	1.2	10
	F share	52.9	10.8	35.8	11.3	10.8	46.4	12.6	39.1	44.1	42.1	33.6	3
1982	M and F	9.5	0.2	23.9	0.6	9.3	22.5	6.0	6.1	19.3	0.3	2.3	10
	Total F	11.8	-	23.7	0.2	3.6	26.8	1.9	6.7	22.8	0.2	2.3	10
	F share	48.7	10.0	38.8	11.8	14.8	4.7	12.0	13.0	45.9	33.3	38.2	3
New Zealand													
1971	M and F	11.5	0.5	25.1	1.2	8.4	17.7	9.2	5.8	19.4	1.2	-	10
	Total F	5.5	-	22.2	0.3	0.9	24.3	5.5	8.1	31.6	1.6	-	10
	F share	14.0	3.4	26.3	7.7	3.2	40.9	17.5	41.5	48.8	35.7	-	2
1981	M and F	10.8	0.4	23.3	1.2	6.4	16.4	8.1	6.9	23.0	3.5	-	10
	Total F	7.0	-	18.9	0.2	0.9	21.2	5.7	9.2	32.9	3.9	-	10
	F share	22.2	7.1	27.3	6.2	4.7	44.0	24.1	45.7	48.9	39.1	-	3
Pakistan													
1972	M and F	56.9	0.4	12.0	0.4	3.3	9.4	4.7	0.8	7.0	3.1	2.0	10
	Total F	50.8	0.4	8.9	0.6	4.0	9.1	4.0	0.8	13.2	5.1	3.1	10
	F share	36.2	0.2	14.2	0.2	2.2	5.6	1.6	0.5	27.2	4.5	7.8	10
1981	M and F	2.6	2.3	5.9	1.6	2.0	2.3	1.5	2.5	7.6	3.3	8.8	10
	Total F	2.6	2.3	5.9	1.6	2.0	2.3	1.5	2.5	7.6	3.3	8.8	10
	F share	2.6	2.3	5.9	1.6	2.0	2.3	1.5	2.5	7.6	3.3	8.8	10

Table 5. (continued)

Country or area and year	Agriculture	Mining	Manufacturing	Utilities	Construction	Trade*	Transport & communications	Financial & business services	Community social & personal services	n.e.c. **	Not employed	Total	
Philippines													
1970	M and F	51.4	0.4	11.4	3.8	0.3	7.0	4.2	-	15.7	1.5	4.3	100.0
	Total F	31.4	0.1	19.4	-	0.1	12.0	0.3	-	27.5	1.2	8.0	100.0
	F share	19.5	5.3	54.4	4.0	0.7	54.8	2.2	-	56.1	24.9	59.8	32.0
1981	M and F	50.0	0.7	10.2	0.4	3.2	11.6	4.2	2.1	17.6	-	-	100.0
Republic of Korea													
1970	M and F	41.6	1.0	13.9	0.3	4.5	12.3	3.2	0.9	11.3	0.3	2.2	100.0
	Total F	58.9	0.2	14.3	-	0.5	13.5	0.7	0.5	9.7	0.2	1.4	100.0
	F share	41.4	7.0	35.9	6.4	4.3	38.2	7.6	17.5	28.9	21.4	22.2	37.2
1982	M and F	30.7	0.7	20.2	0.2	5.5	21.1	4.0	2.6	10.6	1.3	3.1	100.0
	Total F	34.9	-	20.3	-	0.1	27.7	1.0	2.3	10.1	1.2	1.4	100.0
	F share	43.7	1.8	38.6	16.1	7.0	50.5	9.5	34.6	36.1	34.4	17.1	38.4
Singapore													
1970	M and F	3.1	0.3	19.7	1.0	5.9	21.0	10.9	3.2	24.4	0.1	10.4	100.0
	Total F	2.6	0.1	25.7	1.5	0.3	15.5	2.1	2.8	31.4	-	18.0	100.0
	F share	22.7	9.5	33.6	6.5	7.0	19.0	5.0	23.0	33.3	-	44.5	25.7
1982	M and F	1.0	0.2	29.5	0.7	6.3	22.1	11.2	7.8	20.4	0.2	0.6	100.0
	Total F	1.0	0.2	35.8	0.2	1.4	23.4	6.0	10.5	20.8	-	0.7	100.0
	F share	33.3	20.5	43.3	12.5	8.1	37.8	18.9	48.3	36.4	8.2	42.8	35.7
Thailand													
1970	M and F	78.2	0.5	4.1	1.2	0.2	5.2	1.6	-	7.0	0.9	1.2	100.0
	Total F	82.7	0.2	3.7	0.3	-	6.0	0.2	-	5.4	0.5	0.9	100.0
	F share	49.7	26.4	42.6	14.4	12.0	53.9	6.0	-	36.3	26.7	36.4	47.1
1980	M and F	70.1	0.2	7.9	1.9	0.3	8.4	2.0	-	8.3	-	0.9	100.0
	Total F	73.5	-	7.0	-	0.6	9.6	0.3	-	8.1	-	0.7	100.0
	F share	49.5	24.3	42.1	10.0	11.9	54.0	6.6	-	46.1	-	40.5	47.3
Pen. Malaysia ***													
1970	M and F	47.3	1.9	8.8	0.7	2.1	9.6	3.4	-	16.5	5.1	4.7	100.0
	Total F	55.4	0.8	8.0	0.1	0.5	5.4	0.5	-	15.4	8.0	5.9	100.0
	F share	37.2	12.8	29.0	5.2	7.1	17.9	4.2	-	29.7	50.5	40.2	31.8
1980	M and F	35.9	1.2	14.3	0.2	4.7	12.9	3.7	1.9	21.4	2.3	1.6	100.0
	Total F	42.4	0.4	18.2	0.1	1.1	11.5	0.7	1.7	19.7	2.3	2.1	100.0
	F share	38.5	10.6	41.4	6.8	7.6	29.0	6.1	29.4	30.0	31.7	42.7	32.6

\* Trade = wholesale and retail trade, hotels and restaurants.

\*\* n.e.c. = not elsewhere counted (not adequately described).

M = male; F = female.

\*\*\* Figures for Peninsular Malaysia from the 1970 and 1980 Population Census.

Source: Lim, L. 1986, Status of Women in Asia and the Pacific Region Series 1. Women in the Economy: Employment. Bangkok: ESCAP.

Table 6. Women in the Manufacturing Labor Force

Country		% Manufacturing Labor Force that is female	Ratio of Women to Men in Manufacturing
Singapore	(1980)	46.3	.86
Hong Kong	(1981)	45.7	.84
Pen. Malaysia	(1980)*	41.4	.71
Thailand	(1980)	42.1	.73
Indonesia	(1978)	49.8	.99
Philippines	(1978)	47.7	.91
South Korea	(1981)	39.0	.64
Japan	(1981)	38.8	.64
USA	(1981)	32.5	.48
UK	(1980)	28.9	.41
W. Germany	(1981)	31.6	.46

\* Figures for 1980 from General Report of the Population Census 1980.

Source: International Labour Office Yearbook of Labour Statistics  
1982.

employment by industry in the course of economic development. In Japan, for instance, while the largest proportion of the female labor force was in agriculture in 1970, twelve years later they had moved mainly into trade, followed by manufacturing and then by community, social and personal services. In Singapore, between 1970 and 1982, there were proportionate shifts in female employment to greater concentration in manufacturing. In Hong Kong, manufacturing, community, social and personal services and trade have remained the major employment sectors for women over the 1970s. "The pre-eminent role of manufacturing in these two urban economies reflects their rapid industrialization--which took place earlier in Hong Kong than in Singapore--especially in female-intensive export manufacturing industries" (Lim, 1986: 14). In the other newly industrializing economy of the Republic of Korea, however, manufacturing fell from second to third place in order of importance of female employment between 1971 and 1982, probably because the nature of manufacturing was different with male-intensive heavy industries like steel, automobiles and ship-building more important than in Hong Kong and Singapore.

### III. The Role of Women in Economic Structural Transformation

In what ways have changing female participation contributed to the rapid economic structural transformation of the Asian Pacific Rim countries? From a general perspective, half the human population must surely represent an important pool of physical labor, human talents and skills. Increasing levels of female participation must mean that their human resource potentials are being tapped for economic purposes. But aside from the general issue of how women actively contribute to the development process, is there anything significant about female labor force participation in the Asian Pacific Rim countries that might help account for their impressive development performance?

Unfortunately, there is still little in the way of empirical generalization or theory to inform our understanding of the relationship and its implications. Much of the "women in development" literature has either been from a feminist perspective, focused on how

development has affected the status of women, been concerned with the relationship with fertility or simply viewed women's labor force participation as a response to economic development. Little specific treatment has been given to female labor force participation as an important factor in economic dynamism. The problem is also one of disentangling cause and effect--do burgeoning labor needs of a fast expanding economy draw women into the labor force, or do the general forces of modernization or changes in attitudes favorable to women's work lead to their entry into the labor force thus helping to accelerate the pace of economic development? In reality, it can be expected that many of these changes occur simultaneously or interact in complex ways. Changing demand for labor in the process of structural transformation would increase female participation but once the process is initiated, the interactions between demand and supply and their effects on development are difficult to isolate.

There has been some recognition that "without women's labor, certain sectors and industries could not have developed to the extent that they did in many countries" (Lim, 1986: 21-22). For the industrialized nations, the important role women's employment has played in the industrialization process has been acknowledged. Standing (1986: 6), citing from the study by Pinchbeck (1930), pointed out that in both Britain and Japan, the growth of female employment coincided with the acceleration of the process of capital accumulation, and that the low wages paid to women workers helped to keep the rate of profits sufficiently high to induce industrial investment that led to further expansion of employment.

To analyze the case of the Asian Pacific Rim countries, one immediately striking feature is that the sectors that have been the engines of growth in these economies have also been the sectors that tended to have female-dominated work forces, with female employment growing faster than that of males in the 1960s and 1970s. Since the dynamic non-agricultural sectors have been manufacturing, services and trade, we can examine the special role of women in these sectors.

The Asian Pacific Rim countries have been shown as having a higher level of female participation in the manufacturing sector than do even the Western nations. The type of industrialization that provided the dynamic spurt in these economies was based on light, labor-intensive, export-oriented manufacturing relying heavily on

foreign investments. To an important extent, female labor has been responsible for attracting foreign financial and physical capital and modern technology into these countries. Several of them have been the major locations for foreign capital investments (see, for example, World Development Report, 1982: 136-137). Multinational factories mushroomed in the free trade zones and export processing zones in Singapore, the Republic of Korea, Hong Kong, Malaysia, Philippines and Thailand.

It is not by accident or chance that women make up close to 90 percent of the semiconductor labor force, and virtually all unskilled or 'semi-skilled' operatives are female. Nor is it by chance that other female-typed jobs have similar concentrations. Indeed, a UNIDO study suggests that in many industries, firms would rather relocate their operations than accept a different sector of the population as their labor force (UNIDO, 1980). Thus, there must be some unique characteristics pertaining to young, Southeast (and East) Asian, female laborers that make them particularly attractive to these industries (Eisold, 1984: 2).

These characteristics of females can be portrayed in terms of:

cheap, docile, highly trainable, non-unionized labour (as advertized by the Malaysian Government in its early fervor to industrialize through attracting foreign investment);

the manual dexterity of the oriental female is famous the world over. Her hands are small and she works fast with extreme care. Who, therefore should be better qualified by nature and inheritance to contribute to the efficiency of bench-assembly production lines than the Oriental girl? (another investment brochure published by the Malaysian Government);

their greater docility and willingness to subject themselves to the rigid discipline and tedious monotony of the assembly line (Lim, 1981: 184);

the MNCs also prefer female labour, especially young, unmarried girls as a major cost-reduction strategy due to their higher degree of efficiency, lower wages and more malleable nature relative to other segments of the labour force (Lim, 1984a: 131);

wages relative to productivity have been declining; that is, the productivity of female workers in the semiconductor industry has been rising at a rate faster than that of the rise in wages (Eisold, 1984: 63-64);

subsequently, this preference was reinforced by the employers' perception that women were more reliable and more docile workers than men (Hein, 1981: 32);

One aspect of the labour force in Southeast Asia, particularly in Malaysia, the Philippines and Singapore, which makes it more attractive than that of many alternative locations is the generally high levels of education. Firms can often expect to find English speaking female workers with some secondary education (Eisold, 1984: 23).

The ready supply of an endless stream of female labor at low wages has been a crucial element because labor is the single largest cost of production. An important reason for the link between labor-intensive, export-oriented industries and the use of female labor is that women's wages are often lower than men's while their productivity may be at least as great. Labor-intensive production intended for world markets requires relatively low wages in order to be profitable and competitive (Anker and Hein, 1985: 46; see also UNCTAD, 1983). For example, a study on Hong Kong (Chen, 1976) argued that after labor supply from the Chinese Mainland dried up, it was the increased participation of women that constituted the major source of unlimited supply of labor at relatively constant wage levels, giving Hong Kong's industries a competitive edge over more advanced economies (this point was also made by Cho, 1987: 223).

That women's wages are lower than those for equivalent male

workers is a well-documented fact. What has been less publicized, however, is that women in modern manufacturing not only earn less, their wages tend to be tied to various incentive systems which are intended to elicit increased productivity but in actuality squeeze greater efforts from the women while allowing management the option of granting or withholding a portion of the wage (see, for instance, Lim, 1984: 132-133, for documentation of techniques used by multinationals to pay low wages while ensuring maximum productivity from female workers). Even more important is the fact that the disparity between wages and productivity is so great that the manager of a factory in a Malaysian free trade zone revealed that one worker working for one hour produces enough to pay the wages of ten workers for an entire shift, plus the cost of transportation and all the materials used (Eisold, 1984: 64).

The semiconductor industry provides a striking illustration of the important role of female labor. Semiconductors represent the major component of the electronics industry which has been the star performer in the industrial development of these countries; it has been among the largest and fastest growing of the industries engaged in offshore sourcing and one of the most widespread within the region. About half of all the workers engaged in Asian free trade zones are estimated to be in the electronics industry, and in the ASEAN countries most of these belong to the semiconductor industry. Estimates of the total number of young, female semiconductor workers is about 300,000, with 90,000 in Hong Kong and 50,000 each in Malaysia and Singapore (Eisold, 1984: 3). With keen technological competition and the increasing cost of equipment raising capital needs of the industry and price competition driving production prices down, labor as the major cost component has to be cheap. In this respect, female workers in the Asian Pacific Rim countries represent a "nearly ideal labour force":

The large majority of semiconductor operatives are young (16-23), female and single. Some of the advantages of these workers to the firms are by now clear. They are generally tractable, being used to obedience to men within their traditional social structures, cheaper and can be more easily laid off than men, due to their lower status and

tradition of economic dependence that leads them to view themselves as supplementary earners. There is also a 'natural shedding' at marriage, when many chose to leave the labour force, and no maternity benefits need to be paid. Women are generally accustomed to painstaking work and have quite small and nimble hands, and they seldom directly express anger, frustration or resentment at the work (Eisold, 1984: 35).

It has not only been in the export-oriented manufacturing industry that the feminine qualities of women workers have been put to best advantage (or exploited, depending on the viewpoint adopted) by the Asian Pacific Rim countries. The tourist industry has also been a major earner of foreign exchange and the harsh reality in the major cities of most of these countries is one of relatively rampant "commodification of women" in entertainment and prostitution-related occupations (Phongpaichit, 1984: 251). Erotic tourism, the "sex tours", was certainly one of the major attractions of places like the Philippines and Thailand. The "subservient, service mentality" of oriental girls is also increasingly put to use in restaurants, bars, hotels, barber shops, etc.

The same subservient, insecure position of women, coupled with abject poverty, also helps to account for the high ratio of females in recent temporary international labor migration streams. Again, the opportunities that are available not only within the richer countries of the region itself but also as far away as Canada, the Middle East and West Germany are related to women's traditional roles and lowly positions. The demand for domestic maids and female entertainers has been growing even though the economic slowdown has seriously reduced the demand for male migrant workers. The official estimate is that women form at least 43 per cent of all legally-registered Philippine contract workers abroad, but the government itself describes its statistics as "quite inadequate" and unofficial figures run as high as 200,000 female Filipinos working overseas (Asia Magazine, September 6, 1987). Philippines and also Thailand have come to rely increasingly for their foreign exchange earnings on the "comparative advantage of women's disadvantages" (Charlton, 1984). The Philippine Government estimates that salaries sent home to families by women workers abroad

--most of them married--amount to at least half a billion United States' dollars a year.

In other parts of the domestic service sector, the relatively high levels of education and training (at least a secondary education) have enabled women to move into those occupations, such as teaching, nursing, clerical work and business machine operators, that have become more segregated as these countries develop.

The contribution of women has also been in trade and commerce. Women in South-east Asia have traditionally featured prominently in informal sector activities such as petty trading, brokering, shop keeping and other small-scale enterprises; their contribution has been in lubricating the developing commercial market economy especially in the early stages of development. In the process of modernization, the center of gravity has shifted from these informal sector activities to sales positions in large department stores and emporia that are so characteristic of the region's large towns, and the productivity of these women has risen rapidly. It might also be worth mentioning that in periods of economic slowdown, the informal sector may play an important role in filling the slack, as has been happening in this current recession. The vibrance of the "pasar malams" in Malaysia is a good example; the role of women even if on a part-time basis in these activities in contributing to family income and in sustaining economic activities is unfortunately a subject on which little concrete evidence is yet available. The flexibility of women being prepared to take lower order jobs, hawking or working as maids, when men have been retrenched and find it difficult to get other jobs is another form of household survival strategy.

#### IV. The Supply Response of Women

In this section, we examine how demographic and socio-psychological factors have interacted with economic factors in the Asian Pacific Rim countries to account not only for the increased participation of women in the labor force but also for the unique characteristics of the female labor force that have represented the basis for rapid export-oriented industrialization, for wooing foreign investments, for successfully promoting tourism, and, in some coun-

tries, for valuable foreign exchange earnings.

To meet the specific demand for female workers created by the type of development strategy adopted by the countries along the Asian Pacific Rim, the supply of labor had to be able to adjust itself smoothly (a point emphasized by Chen, 1976). Supply itself is determined by demographic, economic and sociological factors. Several writers (Chen, 1976; Jones, 1984; Eisold, 1984; Khoo, 1987) have implied that the Asian Pacific Rim experience has been unusual in that compared to other regions, there has been "a lack of institutional barriers to entry . . . there are no socio-cultural barriers to female economic participation, and that demographic and education patterns ensure that there is a supply of qualified female labour" (Khoo, 1987: 33).

Associating rapid growth in Japan, Hong Kong, South Korea and Taiwan in the post-war period with rapid growth in female labor force participation and referring specifically to the Hong Kong experience, Chen (1976) identified two ways in which female labor force participation has the potential for providing an unlimited supply of labor at relatively low and stable wages--through the transfer of labor from the "subsistence" sector (which could be not only in agriculture but also in traditional handicrafts and services) to the modern sector, and through an actual increase in labor supply. Insofar as the labor supply needed for modern sector development has to come from the subsistence sector and a very large proportion of the surplus labor is female, women would play an important part in the reallocation of human resources. Secondly, where the male participation rate is already high in the early stages of development, it is women whose economic involvement is initially usually low that have the potential for ensuring a perfectly elastic supply of labor at relatively low wages to the industrial sector.

Thus if the supply factors of female labour participation can adjust themselves smoothly to the increasing demand for labour in the industrial sector, women workers constitute an important and very often the only available source of unlimited supply of labour in the process of rapid industrialization (Chen, 1976: 140).

Part of the logic behind export-led development strategies is the existence of large labor reserves. In the Asian Pacific Rim countries, as in many areas of the developing world, this surplus has been generated by a decrease in employment opportunities in many traditional activities. Population growth as a result of high fertility rates in the immediate post-war period would also have added to the labor reserve. For women, the decline in traditional activities may not always be compensated by an increase in modern sector job opportunities. But in the countries in question, growth in modern sector job opportunities has been so great that women have not only moved (and, as important, been able to move) out of agriculture and other traditional activities but also to increase their participation.

In situations such as in the city states of Hong Kong and Singapore where the amount of surplus labor available is limited because of the small size of the agricultural sector, or where the speed of inter-sectoral movements cannot cope with the rapid rate of expansion of the industrial sector resulting from high rates of capital accumulation and technical progress, or where agricultural productivity does not rise rapidly enough to meet the increasing demand for food, increase in both the quantity and quality of female labor participation has been of vital importance.

The increase in labor supply has been largely through the entry into the labor force of young girls taking up wage employment for the first time where before they might have remained at home or on the farm, after completing their education, waiting to get married and have children. In response to the unprecedented growth of employment opportunities in the dynamic manufacturing sector, autonomous female migration especially of young single girls from rural areas or small towns to the big urban centers has been another concomitant feature of the structural transformation in these societies. Unlike the South Asian experience where there are low levels of independent female migration, in the Asian Pacific Rim countries the evidence is that some 60 percent of rural-urban migrants are under 30 and females predominate among migrants under 25 (Pryor, 1977: 7). It is not only in the metropolitan and other urban areas of the Philippines and also Korea that the migrants have been predominantly women. In Indonesia, Thailand and Taiwan, there have also been more women than men among urban migrants in the 15-19 years age group. There have also been

dramatic increases in the volume of female in-migrants in Malaysia since the early 1970s (see Khoo, 1984: 278-279). Very often, young girls are sent by their families to take up factory or service jobs in the cities to supplement the family's income from agriculture. With their daughters earning incomes, parents are less anxious or willing to marry them off at young ages. Changes in cultural norms and perceptions regarding the economic value of daughters have removed some of the "institutional barriers" to participation of young women in the labor force. Poor families in particular now have greater reason to perceive their daughters as economic assets and may be more willing to invest in their human capital in terms of giving them better education, nutrition, postponing marrying them off, etc.

Female migration not only implies an increase in labor supply going directly into the modern sector, it can help to promote the occupational mobility of other women. The migration of females from countries such as the Philippines, Thailand, and Indonesia to work as domestic servants and other feminine-typed occupations in Hong Kong, Singapore and, more recently, Malaysia contributes, on the one hand, to valuable foreign exchange earnings for their own countries, and on the other, to the occupational mobility of women in the countries of destination. Within individual countries, the availability of female domestic help whether from foreign sources or rural migrants has made it possible for urban women to take up higher level jobs in the modern sector.

Other important factors that would help to explain the supply responses of the female labor force are education and changing social attitudes to women workers. Educational levels have been rising for women in the process of modernization in most countries, but the feature worth noting for the countries under consideration is that the lower secondary level of education that has typically been achieved by most of the younger female population has extended the horizons of the girls beyond rural farm work or housework, but has not been sufficient to offer them satisfying jobs or more scope for occupational mobility. So although the relatively high levels of education have been an asset to the industrialization efforts, they have not got the women themselves beyond low-status, low-paying jobs.

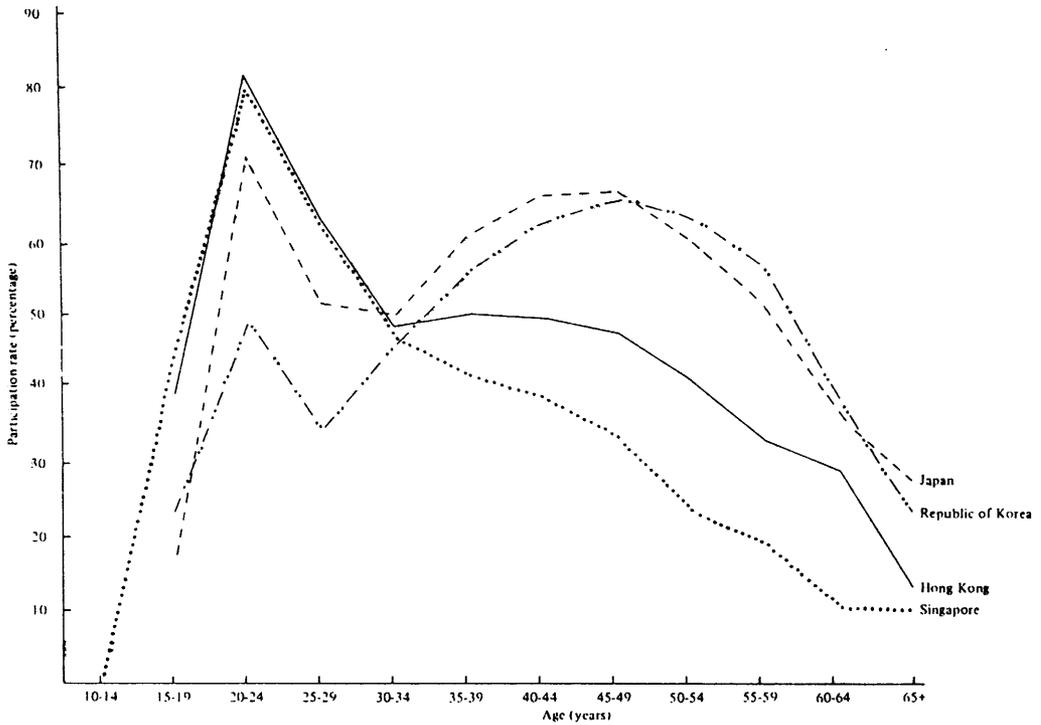
Another important reason for female migration has been found to be the desire to gain independence by moving away from the generally

restrictive village environment and from parental supervision (Lim, 1984: 629). For some women, then, urban employment is a means to experience a different social life, even a chance to escape forced marriages or arranged marriages (Snow, 1977) or the opportunity for those with a Confucian mentality to repay their parents for their upbringing or education (Salaff, 1976).

That it is the participation of young single girls rather than other age or marital status groups that has been prominent and that has been tailored to the specific needs of the development strategy can also be examined from the age profiles of participation. The life cycle of women's participation in the labor force is also related to the life cycle of marriage and the family (Durand, 1975: 37) and can be explained by both "cultural" and "stage of development" factors. The sharp early peak found in age-specific female participation rates in the rapidly industrializing countries in Figure 1 and also Malaysia in Figure 2 reflects the demand that industrialization has created for especially young female labor who are more likely (compared to other segments of the labor force) to have the education, physical mobility, freedom from marital and child care responsibilities and other "feminine" qualities required by the rapidly expanding industries. The sharp decline in age-specific female labor force participation after the early peak in these countries is related not only to Chinese-Confucianist cultural beliefs that married women should attend to the needs of the husband and children but also to the practice of many factories not to hire married women and the difficulty of combining child care with wage employment as extended family supports have been eroded and domestic help has become more expensive in these countries. In the less developed economies of the Philippines, Thailand and Indonesia, the plateau-like pattern in Figure 2 is indicative of the less age-selective nature of female employment in agriculture or in domestic service, petty trade or handicrafts where the combination of child care and work is possible and where experience of older women may be a more valued characteristic. The level of the plateaus in Figure 2 are, however, higher than those in Figure 3 for the South Asian countries; partly because there are no strong cultural sanctions against married women participating in the work force in the ASEAN countries as compared to the South Asian countries.

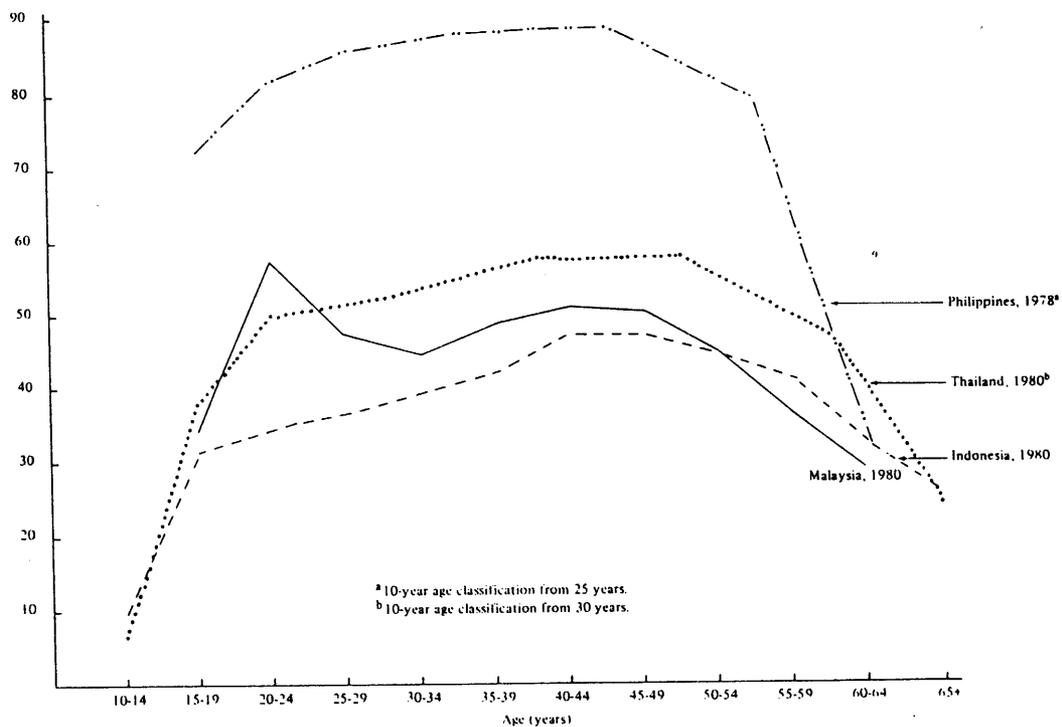
While the lack of "institutional" barriers may explain the high

Figure 1. Female Labor Force Participation Rate by Age in Selected Industrialized or Newly Industrializing Asian Economies (1982)



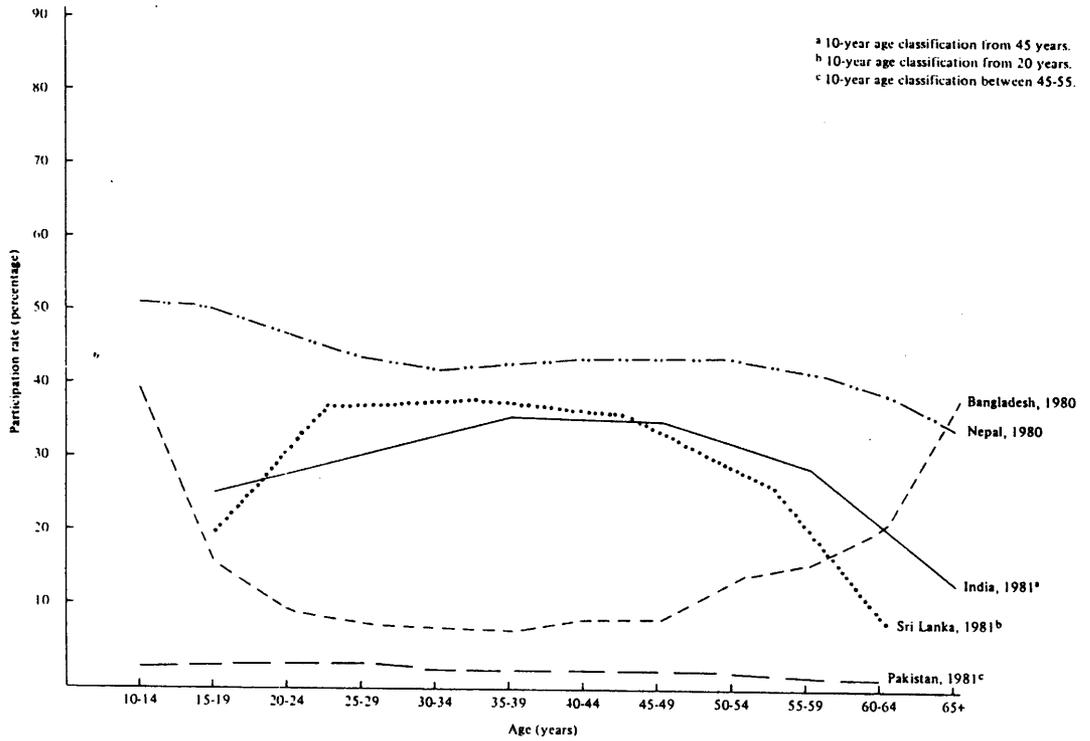
\* Source: ILO, Yearbook of Labour Statistics, 1983.

Figure 2. Female Labor Force Participation Rate by Age in Selected South-East Asian Countries



Source: ILO, *Yearbook of Labour Statistics*, 1983 and 1984.

Figure 3. Female Labor Force Participation Rate by Age in Selected South Asian Countries



Source: ILO, *Yearbook of Labour Statistics*, 1983 and 1984.

levels of participation of women in the labor force in these countries, the point should also be made that in fact, certain aspects of women's social position in these societies have contributed to their suitability as workers, if not to their vulnerability to exploitation. Eisold (1984: 29), for instance, generalizes these aspects in terms of the importance of the family as the basic social and economic unit, the expectation that women will marry and be largely responsible for their families' economic welfare but still be dependent on the family unit and be formally subject to the authority of the males in their families, and the value placed on the virtues of passivity, temperance, reticence, self-control and self-restraint (see also Chung and Ng, 1977) not only within their families but also in the public domain. Eisold then goes on to argue that women's roles and customs within the traditional family structures are excellent training for the kinds of activities and discipline necessary for the types of manufacturing in these countries, the expectation that they will marry and leave the labor force make them short-term workers, and their low status and dependent position in the family make them cheap and easily exploitable as workers.

The social institutions to which these women belong and their patterns of social interaction never actually break down, but are utilized and transformed within a new physical, economic and social order. The women's relationship to the factory depends considerably on their relationship with their families, and their position within the new and emerging social and economic orders is very much determined by their old position in their traditional communities and societies (Eisold, 1984: 90).

The literature also documents the battery of methods that modern industry, particularly the TNCs, have developed in their efforts to keep productivity high and costs low through:

exploit[ing] the traditionally defined attributes of femininity: passivity; submissiveness; sentimentality; sexual desirability, while creating a factory life-style distinct from that of the general society. Their purpose is

to make workers more immediately productive and to inculcate into them a long-term sense of identity with the company. At the same time, the emphasis on passive and ornamental femininity is intended to forestall the rise of any sense of independence or unified strength among the women workers (Grossman, 1979: 3-4).

TNCs routinely sponsor work competitions for prizes, such as cosmetics, and maintain wage policies which penalize workers who fail to work overtime or on holidays or to meet production goals (see International Center for Research on Women 1980: 74).

In all this, of course, the position of the female labor force is highly vulnerable. The juxtaposition of young, inexperienced women workers against sophisticated management practices, their still low social status and the need to still confront socio-cultural prejudices in spite of their increased economic participation, the deliberate exploitation of their "feminine" qualities rather than the enhancement of their potential human resource contributions, the pressing realities of poverty for many of them--can only mean that women have been the tools but not the equal beneficiaries of the economic dynamism in these countries. Not only have their remunerations been lower and their contributions under-valued, large proportions of the female labor force in industry have been subject to various health and safety hazards in their work environments (Leong, 1980; Ackerman, 1980) and they remain inadequately protected by the law. The question also remains whether their increasing participation in the labor force has actually improved their economic marginality or social status or decision-making powers within the family and in the community or political life of these countries.

#### V. Issues for Research

The outstanding issues for research are still many. In this section, the areas that are briefly suggested focus only on further work that could contribute to greater knowledge on the contributions of women to the economic dynamism of the Asian Pacific Rim countries, and not to the broader field of women in development nor to the

relationship between women's economic roles and demographic change.

Inferences of the relationship between female participation and economic growth in this paper have been made mainly from cross-sectional data. While the possibility of cross-national analysis as a surrogate for longitudinal study is instructive, the relationships to developmental processes must always be tentative without comparable time-series data for individual countries.

There is a need to compile and analyze statistical data on patterns of women's employment and earnings over time for each of the countries we are interested in. Such data should include information on the characteristics of women workers (age distribution, educational levels, marital status and family backgrounds, and ethnic and cultural affiliations where relevant) and their industrial and occupational characteristics (including productivity, skill training, occupational mobility, their human-capital competitiveness, capital-intensity levels of given occupations and industries, etc.). Such information should in each case be compared with information on men's employment and earnings to throw light on changing gender roles/substitution and relative gender positions over time.

For each country, a detailed picture of women's participation in the labor force, remuneration and conditions of work relative to men's can be related to concurrent changes in the economy and society over time (statistical series on GDP and employment growth by sectors and aggregate, export patterns and types of foreign investments, labor market conditions, technology shifts, literacy rates and levels of educational attainment, both internal and international patterns of migration, age at marriage, fertility and family size, etc.). Comparisons over time, among sectors, industries and occupations, for females and males and among the different countries using such detailed information should provide a firmer basis for assessing and understanding the contributions of women.

Some attention should also be given to the influence of government policies on the relationship between female labor force participation and economic growth performance. Apart from the question of educational and training equality for the sexes and legal protection for women workers, there is also the issue of equal access for women to government-created assets such as licences, credit facilities, subsidies, hawking permits, extension programs, etc. A review of

government policies in the broader context of choice of development strategies in the different countries would reveal how they have directly or indirectly affected the demand for and the supply of female labor. Particularly interesting would be investigations of the impact of planned interventions or programs (including minimum wage laws and subsidization of capital) as distinct from autonomous processes of economic or social change that have influenced the employment of women and their status in such employment.

The concern for the future is not only whether female participation will continue to increase but more important, what will be the potential for women to contribute to further structural transformation of these economies. It would be useful to speculate on the future role of women as the Asian Pacific Rim countries shift the bases of their economic performance or move to high-technology industry. With further development, other bases may be found upon which investment is made and industrialization takes place, such as adequate and cheap infrastructure, technological changes, technology and skill content, more human-capital competitive labor markets, availability of other yet cheaper wage countries, etc. Laborintensive, export-oriented industries are notoriously "footloose" and vulnerable to economic fluctuations. In many of these countries, growing social awareness and organization among the women themselves have also led to greater concern for the welfare and protection of women and public outrage against their exploitation. In such contexts, what will be the demand for women workers, to what extent will there be capital/labor substitution and male/female substitution and how far will women have access to familial and social resources to enhance or adapt their human capital to these changing conditions or will they be relegated to greater economic marginality? In this connection, some insight may be gained from an examination of the differential impact of the recent economic recession on women workers relative to their male counterparts. It is useful and important to know if women and their job opportunities are more vulnerable to fluctuations in economic activity and their mechanisms for adjustment in such periods.

The theoretical considerations can be identified in terms of the extent to which and the conditions under which gender has influenced the economic outcomes in these countries; women's distinct influence on production and productivity through substitution between their own

labor in the household and traditional sector activities and modern sector activities, between labor and capital and between male and female labor under different development, institutional and social conditions in static and dynamic contexts; the relative role of underlying non-market (socio-cultural and demographic) forces vis-á-vis market forces that together determine outcomes with regard to women's participation in the economy; and, finally, whether the patterns of female participation over time in each of the Asian Pacific Rim countries can be generalized to provide an explanation of their joint unique economic performance.

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