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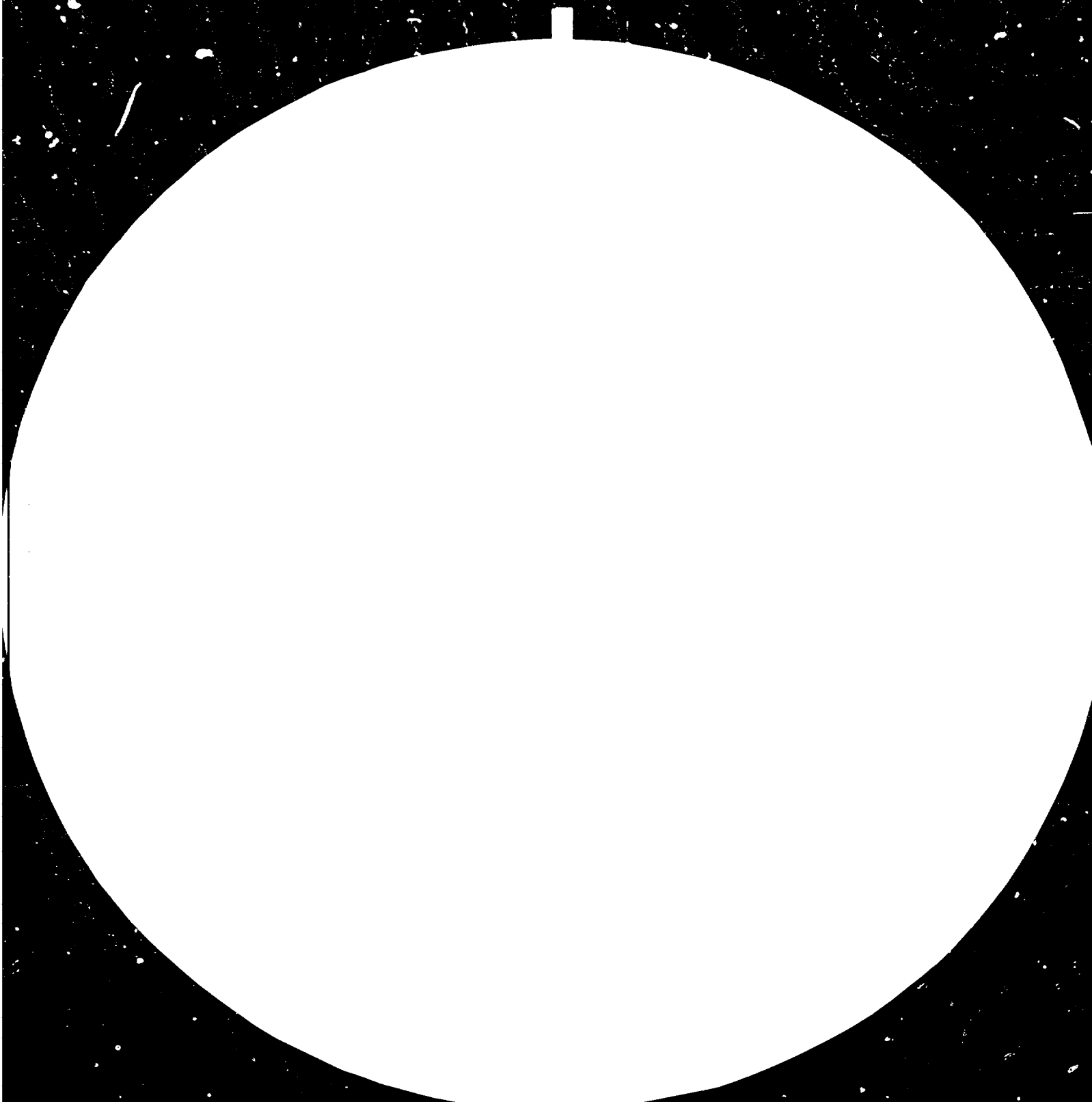
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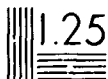


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WOMEN IN THE REDEPLOYMENT OF MANUFACTURING INDUSTRY
TO DEVELOPING COUNTRIES*

Prepared by the
Global and Conceptual Studies Section
International Centre for Industrial Studies

UNIDO Working Papers on Structural Changes
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FOREWORD

In UNIDO's research programme on industrial redeployment, a series of studies are being undertaken which aim at examining the pace and pattern of the international industrial restructuring process and their implications for the various country groups and individual economies. The studies have thus far included analyses of structural adjustments and redeployment potentials in developed countries and investigations into the experience and prospects of developing countries in regard to redeployment from industrialized countries.

This present study intends to highlight one particular issue of the redeployment process: the role and problems of women in developing countries in this process.

In the course of the industrialization of the developing countries the traditional role of women is undergoing dramatic changes. In many countries the female labour force has emerged as a major resource for industrial development. The use of this resource for this purpose has been discovered and utilized primarily by international industrial companies in search of new cheaper locations for their labour-intensive production lines. A brief review and analysis of the dimensions and implications of the female-intensive pattern of employment in these companies is the subject of the present study.

The relocation of industrial capacities to a developing country for export purposes on the basis of the host countries' endowment with low wage labour constitutes one special form of industrial redeployment. Although the term redeployment has been subject to different interpretations, a general consensus seems to emerge for applying a much wider definition than this present study would seem to imply. According to the broad definition, redeployment would mean the shifting of production factors from one production unit or location to another, and would thus be synonymous with the terms "restructuring", "structural adjustment" or "structural changes".^{1/} The study focusses more narrowly on the role and problems of women employed in export-oriented, low-skill production. The study should thus not be seen to constitute a comprehensive analysis of the situation of women in the total process of industrial redeployment to developing countries but rather as a case study indicating main features of female employment in the first stage of this process. When compiling the report it also proved to be difficult to strictly separate certain phenomena and to confine the findings to the specific case of female labour in "redeployed" industries. Thus some observations may apply to both foreign and domestic companies, to female and male workers or to export and domestic market oriented industries. Nevertheless, a number of important observations can be made and

^{1/} For a discussion of the definition of the term "redeployment", see UNIDO, "Redeployment of Industries from Developed to Developing Countries", ID/Conf. 4/9, 3 October 1979, pages 5-8.

conclusions drawn from the study regarding the role and conditions of women in the process of restructuring and/or internationalization of industrial production. The ultimate aim of the study is to highlight certain essential issues and thus to contribute to the current debate on this matter.

The paper is based on a study undertaken and data retrieved by Linda Y.C. Lim, Department of Economics, Swarthmore College, U.S.A., as UNIDO consultant. The views expressed in this paper therefore do not necessarily reflect the views of the secretariat of UNIDO.

I. INTRODUCTION

The redeployment of manufacturing industry from the developed to developing countries locates in developing countries inter alia plants manufacturing for export to the home markets of the developed countries. Such relocation may be carried out directly by transnational corporations. They establish wholly-owned subsidiaries engaged in direct production in developing countries for export back to the home markets of the parent companies. Or, transnationals may subcontract or licence to indigenous enterprises in developing countries the production of manufactured items for further processing or final sale in the developed countries. Finally, independent domestic manufacturing enterprises in developing countries may penetrate developed country markets through contracts with transnational buyer corporations such as large department and chain stores. In all these cases, actual or potential productive capacity is relocated from manufacturing plants in the developed countries and established in the developing countries.

Redeployment of industrial capacity from developed to developing countries can be motivated by the need to keep or secure access to the markets of the developing countries. ^{1/} But the salient characteristic of most foreign dominated industries in developing countries which are labour-intensive, that is, have a high ratio of labour costs to total costs of production, is that they are motivated chiefly by the search for abundant low-wage labour, in order to reduce costs and prices in competitive final markets. Labour-intensive industries in some developed countries have in the past relied on internal relocation in search of cheaper domestic labour, and more recently immigration of foreign labour. ^{2/} Relocation to developing

^{1/} See, for example, Lee Ann Reynis, "The Proliferation of U.S. Firm Third World Sourcing in the Mid-to-Late 1960's: An Historical and Empirical Study of the Factors which Occasioned the Location of Production for the U.S. Market Abroad," Ph. D. dissertation, Department of Economics, University of Michigan, 1976; and Richard W. Moxon, "Offshore Production in the Less-Developed Countries - A Case Study of Multinationality in the Electronics Industry," The Bulletin, No. 98-99, July 1974, New York University Graduate School of Business Administration, Institute of Finance.

See also UNIDO Working Papers on Structural Change No. 2 - "Industrial Redeployment in Sweden: Prospects and Obstacles", UNIDO/ICIS.54/Rev.1, December 1979; No.5 - "Industrial Redeployment Tendencies and Opportunities in the Federal Republic of Germany", UNIDO/ICIS. 90, May 1978; No.7 - "Industrial Redeployment Tendencies and Opportunities in Switzerland", UNIDO/ICIS. 115, July 1979; No. 9 - "Industrial Redeployment Tendencies and Opportunities in Belgium", UNIDO/CIIS.131, November 1979.

^{2/} Thus, for example, American textile, garments and electronics companies have in the past two decades moved from locations such as New York State and Massachusetts to the American South for cheap rural and black labour, and to the Southwest for labour on Indian reservations and Chicano communities. See, for example, North American Congress of Latin America, "Capital's Flight: The Apparel Industry Moves South," March 1977. Many apparel manufacturers in New York and the Southwest and West employ illegal immigrant labour. In Western Europe, firms have for years relied on immigrant "guest workers" from Southern Europe, the Eastern Mediterranean and Northern Africa to work in low-wage labour-intensive industries.

countries is simply another way a transnational corporation can remain competitive in that specific production activity.

Beginning in the 1960's, industrial redeployment to developing countries has been accelerated by the policies of host governments eager to encourage foreign investment in export-oriented industrialization. This path of industrial development seems to offer many advantages to the host developing country: Since manufacture for export is subject to world competitive pressures, it is likely to be technically efficient. In addition, because of the orientation to a large and growing world market, there is substantial potential for growth, which contrasts with the small, domestic markets which have already stalled the development of import-substituting industries. Because the comparative advantage of developing countries dictates that most export-oriented industries are labour-intensive, the creation of large numbers of unskilled as well as skilled jobs offers a likely solution to the growing problem of high and rising unemployment. Export-oriented industries are also expected to make a welcome contribution to host countries' foreign exchange earnings, and to transfer much-needed skills and technology. ^{1/} To attract such industries, developing nations throughout the world have offered investors an array of investment incentives - tariff exemptions, prolonged tax holidays, favourable labour regulations, and subsidized industrial estates, especially the Free Trade or Export Processing Zones. ^{2/}

Thus the need of industry in the developed countries for an expanded supply of low-wage labour, and the need of governments in developing countries for industries which would create mass employment, have both been met by this form of redeployment of industry to developing countries. From both points of view, labour is the crucial factor in industrial redeployment.

One of the most striking facts in labour-intensive industry branches which are under strong competitive pressures on the international markets is the large employment of women, both in developed and developing countries. Indeed, female-intensity of employment in an industry in the developed countries usually is a strong predictor of this industry's propensity to redeployment. ^{3/} In the U.S.A. for example, women form over 90% of all production workers

^{1/} For a discussion of the issues involved, see G.K. Helleiner, "Manufacturing for Export, Multinational Firms and Economic Development," in *World Development*, Volume 1, pp. 13-21, July 1973.

^{2/} See for example, Otto Kreye, "World Market-Oriented Industrialization of Developing Countries: Free Production Zones and World Market Factories," Part III of *The New International Division of Labour: Structural Unemployment in Industrialized Countries and Industrialization in Developing Countries*. Hamburg, September 1977; *AMPO Magazine* Special Issue, *Free Trade Zones and Industrialization of Asia*, Tokyo, 1977; "Asia's Free Trade Zones," *Far Eastern Economic Review*, May 18, 1979, pp. 76-80; UNIDO Working Papers of Structural Change No. 19, "Export Processing Zones" (to be published).

^{3/} Reynis, L.A., op.cit (1976). See also UNIDO Working Papers on Structural Change No. 11, "Future Structural Changes in Austrian Industry" (to be published).

and operators in the two industries which have been most heavily redeployed to developing countries - electronics assembly and wearing apparel.

This female-intensive pattern of employment is also found in the developing countries in redeployed, export-oriented industries. In the majority of Free Trade Zones, well over 70% of the total employed are women. In Mexico, 85% of the workers in the maquiladoras or "twin-plants" along the U.S.A. border are women. In the Republic of Korea, women account for 75% of all workers in export industries including workers in an export processing zone. In the three other Asian Export Processing Zones (Kaohsiung, Nantze and Taichung) 80% of the workers are women. In the Free Trade Zone (Bayan Lepas) in Malaysia, 85% of all workers are women, and in the Export Processing Zone of Mauritius, more than 80% of workers are women. ^{1/} These figures are repeated for nearly all such industrial export zones in the developing world.

Female-intensive employment is found in both transnational subsidiaries and indigenous firms producing for export from developing countries. In those countries where export-oriented industries are well established, manufacturing has emerged as the major source of employment for women - in Singapore 40% of all economically active women are found in the manufacturing sector, and this proportion rises to 60% in Hong Kong. At the same time, in these two countries and also in the Republic of Korea and Malaysia, the proportion of the total manufacturing labour force which is female ranges from just under to well over half, whereas in the developed countries this proportion hovers around one-third. In other words, as a consequence of export-oriented industrialization programs at a particular stage of economic development, relatively more women than men may be employed in manufacturing in some developing countries, compared to the developed countries.

Looking at the employment figures by industry yields the same result. In the electronics industry, where it is estimated that close to half a million workers are employed in developing countries by American firms alone, ^{2/} over 90% of all production workers, and nearly 100% of all assemblers, are women. Women account for 85% of all textile workers in the Republic of Korea and 90% of all toy industry workers in the Republic of Korea and the Philippines.

The predominance of female employment in foreign-initiated, export-oriented industries raises several issues of utmost importance in the evaluation of the contribution of such industries and of redeployment of industries in general to economic development in the host

^{1/} These figures are from various sources. See especially Kreye, O., op. cit. (1977).

^{2/} North American Congress on Latin America, "Electronics: The Global Industry," April 1977, p. 15.

countries. First, to the extent that these industries simply draw into the labour force a group of workers who were not previously economically active, it does little to reduce the unemployment rate of prime-age males who are considered to form the bulk of the unemployed - the major problem which host governments have expected industrialization to solve. Second, to the extent that the type of employment of women differs from that of men, it may affect the benefits which the host country may expect to derive from such industries. For example, female employment in both developed and developing countries tends so far to be concentrated in low-wage, low-skill "dead-end" jobs promising little upgrading of skills and incomes for the individual worker or for her country. To the extent that foreign exchange earnings from export manufacturing are dependant on the level of the wage incomes of workers employed, these are reduced since women generally receive lower wages than men. Employers may be reluctant to invest in training and skill acquisition for workers if they perceive that these workers as women are unlikely to be committed to the labour force in the long run. On the other hand, the fact that it is women rather than men who are employed by export-oriented factories may be seen as beneficial to the host country because it increases its supply of productive resources through the increased labour force participation of women - an important factor for those few countries which are experiencing labour shortages, such as Singapore. A further concern is what happens when the available supply of young women willing to work is exhausted by the very success of labour-intensive export manufacturing. The evidence so far indicates that rather than turn to available supplies of unemployed male labour, the export industry in these specific branches may relocate altogether to other developing countries where female labour is readily available.

Aside from their economic contribution, the mass employment of women in industry suggests that developing countries may be facing major social and cultural changes in their indigenous societies, no less than are the developed countries where women's labour force participation has increased dramatically in recent years. The likely effects of employment and consumption patterns, on demographic behaviour such as migration, marriage and childbearing, on family relationships and the division of labour between the sexes, all have potential consequences for economic development, as well as being of intrinsic importance. A most important question to be answered is to what extent the relocation of labour-intensive industries to developing countries for export purposes could be a form of development which benefits women and improves their position in society and the economy.

This paper will attempt a review and analysis of the information currently available on women in export manufacturing industries set up in developing countries and/or managed by foreign companies. We will first examine the characteristics of female employment in export industries (chapter II), and next, the reasons why women are so heavily employed by these industries (chapter III). Then we will consider the impact of employment on the women workers themselves (chapter IV), and the implications of mass female employment for the host society and economy as a whole (chapter V). Finally, we will summarize our findings and analysis, and consider the various policy questions and options posed by the phenomenon of mass female employment in redeployed industries (chapter VI).

It will be noted that nearly all the information to be presented and analyzed in this paper relates to female employment in export-oriented industries in only a few developing countries - Mexico, and the Asian countries of the Republic of Korea, the Philippines, Hong Kong, Malaysia and Singapore. These are the countries in which these type of industries have been longest established, sufficient to generate significant research results. Although there are numerous other countries where industrial redeployment for export purposes has occurred, women workers in these few countries probably account for the vast majority of all women workers in such industries in developing countries, and their experience may thus be considered to be quite representative.

II. CHARACTERISTICS OF FEMALE EMPLOYMENT IN REDEPLOYED INDUSTRIES

A. Industrial Concentration

Industrial relocation to developing countries for export purposes has so far been highly concentrated in relatively few industries, the two most prominent being textiles and garments, and electronic products. While the garments industry employs a relatively low technology and is labour-intensive because it is difficult to mechanize, the electronics industry - producing both intermediate components like semi-conductors and final consumer goods like radio and television receivers, cassette tape and record players, hand-held calculators, watches, clocks and electronic games - combines high technology with unskilled labour-intensive processes in certain stages of production, such as assembly. ^{1/} About 300,000 workers, nearly half the total labour force in Asian Export Processing Zones, are employed in electronics factories. ^{2/} In 1975, 74% of the employees in the export-oriented factories in Hong Kong, Tunisia, El Salvador and Mexico, worked in textiles and garments manufacturing (26%) or in the electronics industry (48%). ^{3/} More recent data for Mexico indicates that 60% of the "maquiladoras"-industries in the Border Industrialization Program are in electronic and electrical assembly, while 30% are in textiles and garments. ^{4/} A similar dominance of these two industries is found in other countries. Electronics is relatively more prominent in Malaysia and Singapore, where it employs nearly 50,000 women in each country, ^{5/} while textiles and garments are relatively more prominent in the Republic of Korea and the Philippines.

It is noteworthy that these two industries dominate both in countries where manufacturing for export has been long established (Hong Kong, Mexico, Singapore), and in countries where it is a relatively recent phenomenon (Tunisia, Philippines, Thailand). Other industries in which labour-intensive manufacturing for export is carried out in developing countries include

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- ^{1/} The electronics industry has been the most studied of redeployed industries. See for example, UNCTAD, "International Sub-contracting Arrangements In Electronics Between Developed Market Economy Countries and the Developing Countries", TD/B/C.2/144 Supplement 1, New York, 1975; Moxon, op. cit. (1974); NACLA, "Electronics: The Global Industry"; Linda Y.C. Lim, "Multinational Firms and Manufacturing for Export in Less Developed Countries: The Case of the Electronics Industry in Malaysia and Singapore," unpublished Ph.D. dissertation, Department of Economics, University of Michigan, Ann Arbor, 1978 (a).
- ^{2/} Ho Kwon Ping, "British of the Second Generation," Far Eastern Economic Review, May 13, 1979, p. 78.
- ^{3/} Kreye, O., op. cit. (1977).
- ^{4/} Maria Patricia Fernandez Kelly, "Mexican Border Industrialization, Female Labour Force Participation and Migration," revised version of a paper presented at the Annual Meeting of the American Sociological Association, San Francisco, California, September 1978 (mimeo), to be published in International Migration Review (forthcoming).
- ^{5/} Lim, L.Y.C., op. cit. (1978) (a).

leather, footwear, toys, sports goods, plastic articles, miscellaneous light consumer products, and assembly of scientific and medical instruments and of optical and photographic equipment. The degree of industrial concentration of female employment is shown by the following examples. In Singapore, 83% of the women who entered the manufacturing labour force between 1969 and 1973 were in just four industries: textiles, clothing, electronics and footwear. ^{1/} In Hong Kong, most of the young women workers are found in these four industries: textiles, clothing, electronics and plastics. ^{2/} In the Philippines in 1975, virtually all the firms in the Export Processing Zones were involved in textiles, garments and footwear manufacture; beginning in 1976, transnational electronics companies also moved into the Zones. ^{3/}

In addition to being relatively concentrated by industry, industrial redeployment for export purposes is also heavily concentrated by country, though it is being carried out in a large number of developing countries. The dominant countries are those which were first in the field - such as Hong Kong, The Republic of Korea, Singapore and Mexico. While transnational corporation subsidiaries dominate in electronics assembly, the textile and garments industry, especially in the Asian countries, has a large number of small and large indigenous firms subcontracting to foreign markets. The indigenous textiles and garments industry also tends to be less overwhelmingly export-oriented than the electronics assembly industry. Among transnational subsidiaries, firms of the U.S.A. dominate in electronics while the Japanese dominate in textiles and garments. In all cases, the major export market is the U.S.A., followed by Western Europe and Japan.

B. Age and Marital Status ^{4/}

Export industries in developing countries have - at least so far - had an overwhelming preference for employing young women, as the following figures indicate. ^{5/} About one-third of the total industrial labour force in the Republic of Korea consists of young women aged between 16 and 25, and the average age of textile workers is 19; 30% of textile industry workers are women aged between 14 and 24 years; 90% of toy industry workers are women, almost all of them under the age of 22.

^{1/} Fred Deyo and Peter Chen, "Female Labour Force Participation and Earnings in Singapore," Clearing House for Social Development in Asia, Bangkok, June 1976.

^{2/} Stephen Tang, "Dependent Development and the Reproduction of Inequality: Young Female Workers (Age 15-19) in Hong Kong," paper presented at the Workshop on the Effect of Transnational Corporations on the Demographic and Social Status of Women, East-West Centre, Hawaii, November 1978 (mimeo).

^{3/} Robert Snow, "Dependent Development and the New Industrial Worker: the Export Processing Zone in the Philippines," unpublished Ph.D. dissertation, Department of Sociology, Harvard University, 1977.

^{4/} In this and following sections, the information presented is gathered from a wide variety of sources. To avoid repetition, the annex lists major sources and references by country.

^{5/} The following very typical advertisement placed by a foreign electronics firm in a newspaper in Ciudad Juarez, Mexico may serve as an illustration of this preference: "We need female workers; older than 17, younger than 30; single and without children; minimum education primary school, maximum education one year of preparatory school; available for all shifts."

Of 67,000 direct labour employees in various Export Processing Zones in other Asia in mid-1977, women constituted 85%, with the following age breakdown: 14-15 years, 6.1%; 16-19 years, 40.4%; 20-24 years, 31.1%; 25-29 years, 12.1%; 30-39 years, 6.7%; 40 years and over, 3.6%. 77.6% of the women were under 25 years of age, and 90% under 30.

In Malaysia, 85% of the workers in the Bayan Lepas Free Trade Zone are aged between 18 and 24, with many factories having nearly 100% of their workers between the ages of 16 and 25. One sample survey of electronics workers in the Sungei Way-Subang Free Trade Zone found 93% of them to be between 16 and 25 years. In Singapore, 71% of economically active females were below the age of 30 in 1975. In Mexico, 85% of the workers in the maquiladoras along the border of the U.S.A. are women aged between 17 and 23. A similar age structure of the female labour force in export manufacturing has been reported in Hong Kong, where many workers enter the labour force between the ages of 12 and 14, and in the Philippines. In most countries, the lower wage limit is set by law e.g. 17 in Mexico, 16 in Malaysia and Singapore, but in various other countries, any legal limits seem not to be observed.

The upper age limit seems to be largely determined by the mean age of marriage of factory women, which is somewhat higher than that for other women in their societies. In Mexico, 70% of the maquiladora workers are single. In the Masan Zone of the Republic of Korea, 78% of the women workers are unmarried. In one survey of electronics workers in Malaysia, 36% of them were unmarried. In Hong Kong and the Philippines, a large majority of workers in export industries, and especially in the Zones, are unmarried. In general, it is estimated that up to 85% of the labour force in the Asian Zones is under 30 years of age, unmarried or married without children.

C. Education and Work Experience

The average educational attainment of women workers in export industries seems to be a middle school or junior high school, or middle secondary school level, varying by country and industry. In the Philippines, a high school diploma is almost a necessary qualification for a factory job in the Export Processing Zones. More than two-thirds of the workers in one survey had a high school or better education: 45.6% had completed high school and another 22% had gone to or even graduated from college. In the Republic of Korea, many of those who work in foreign firms are high school graduates. In the electronics industry in Malaysia, workers usually have at least nine years of formal education; 75% in one survey had more than a middle school education, and many have completed secondary school. In Singapore, a primary school education (six years) is a minimum requirement for work in electronics factories, but workers with some secondary education are preferred. In Mexico, maquiladoras workers have completed at least six years of school - a level of educational attainment higher than the average for Mexican workers as a whole of 3.8 years. Many of the women have also attended commercial

schools, and have studied to be nurses, book-keepers, typists, secretaries, computer technicians and beauticians.

Generally speaking, the electronics industry has higher educational requirements than the textiles and garments industry in all countries. While workers in electronics plants must have completed primary school, and preferably some secondary school as well, workers in textiles and garments may have a less than complete primary school education - this is the case in Mexico and also in Singapore and Malaysia. Foreign firms also require higher educational qualifications of their workers than do indigenous firms. In the Republic of Korea, for example, transnational corporations are considered to have raised the educational standard required of a factory worker above that required by domestic firms. In Malaysia and Singapore, indigenous firms tend to have lower educational requirements of workers than transnational corporations - most commonly they require only a primary school education whereas foreign firms require some secondary school education as well.

The young age of most factory women precludes much prior work experience, though this varies from country to country. In most countries, the workers are usually fresh school-leavers in their first job - this seems to be true in all the Asian countries. Where some workers have previously been engaged in paid employment, this is most likely to have been in "informal sector" jobs such as domestic service and seamstressing. Many have also been previously engaged in family labour - in farming in countries like Malaysia, and in piece-work for putting-out industries in Hong Kong.

Two-thirds of the women workers in the Bayan Lepas Free Trade Zone in Malaysia in 1973 were new entrants to the wage labour force; in 1975, less than 20% of the workers in the same Zone had been previously employed, mostly in farming, domestic service, seamstressing and sales. One recent survey in Mexico found that whereas electronics factory workers had a median age of 21 years and 60% of them were in their first job, workers in the apparel industry had a median age of 26 years and only 30% of them were in their first job. Of those who had previously worked, 40% had worked in the services sector as clerks, cashiers, salespersons, beauticians and so on, while the next largest group had worked as domestics in Mexico or the U.S.A., in the latter case almost all as undocumented aliens.

It is interesting to make a comparison here with the pattern of employment in these same industries in the developed countries. In the U.S.A. in 1975, for example, women formed over 90% of all production workers and operators in the two industries which have been most heavily redeployed to developing countries - electronics assembly and apparel. The apparel industry alone employs one out of every five women in the manufacturing sector in the U.S.A. Women also account for an almost equally high proportion of workers in the footwear, toy and plastic goods industries which are being redeployed overseas. A typical electronics firm in the U.S.A. requires only that applicants for jobs be 18 years old. No high school diploma, skills or previous job experience are required. In contrast to the high proportion of unmarried women in export manufacturing industries in developing countries, only 17% of women working in manufacturing industries in the U.S.A., and only 43% of women factory workers in Japan, are unmarried.

D. Structure of Employment

In the developing as in the developed countries, women workers are overwhelmingly (more than 90% employed in direct labour in the observed industries, as production workers and operators. In the garments industry, women work as tailors, stitchers, sewing machine operators, clothes pressers, and assistants - jobs requiring a relatively low level of skill and offering no opportunities for advancement. There are few skilled jobs e.g. fashion designing, available in the industry and virtually no internal job ladder exists. The same is true of other industries like footwear and toy assembly.

Employment in the electronics industry has a more complex and hierarchical structure, but women are concentrated in the lowest assembly jobs. In the U.S.A. for example, women account for 40% of total employment in the electronics industry but over 90% of assembly line workers, while men account for more than 90% of all technicians and engineers, and a high proportion of plant supervisors. 90% of assembly operators of the U.S. electronics industry are now located overseas in developing countries, but the more skilled jobs involving high technology and capital inputs are retained almost exclusively in the home country by vertically-integrated transnational corporations.

Overseas plants are designed only for low-skill assembly processes. Thus a recent survey in Singapore showed that operators still form 87% of the labour force in a typical electronics plant, supervisors 3%, technicians 5% and white-collar workers 5%, despite nearly a decade of government policies to encourage upgrading into higher-skilled, higher-productivity operations. A similar sexual division of labour is observed in these overseas plants, with women being mostly assembly workers while men work in the few skilled jobs available. Women predominate in numbers in these specific industries because most of the manufacturing processes and products which are transferred to developing countries are those in which mainly women are employed in the developed countries as well. In fact the proportion of women in total employment generally is a good indicator of the structure of employment in industries: the higher this proportion, the more concentrated employment is in low level jobs.

In the developing countries, women's wages and earnings are generally lower than those of men in jobs of the same grade or skill level. Thus in some Asian countries, women workers in export industries receive less than half of the wages paid to men and in the other Asian countries, the differential between male and female wages is about a quarter to a third, mainly because of this differential, average wages in the export manufacturing sector are generally lower than for manufacturing as a whole. In Singapore, for example, wages in the export-oriented electronics industry are about a third below the average wages for the manufacturing sector. In some countries, factory wages for women are lower than the wages earned by women with the same educational qualifications in other sectors of the economy, but in other countries they are higher. Thus in the Republic of Korea, female high school graduates earn more in clerical occupations than they do in factory work, whereas in Mexico, maquiladoras workers earn more than do women in clerical, sales and other service sector occupations.

III. REASONS FOR THE EMPLOYMENT OF WOMEN

Most industries which redeploy to the developing countries with the main motive to export to developed countries prefer to employ women workers because they are both cheaper and more productive in certain operations than men in developed and developing countries, and than women in developed countries. There are basically three sets of reasons which have been given for women's so-called "comparative advantage" in labour-intensive manufacturing: (1) Physical characteristics which make women more suited to certain kinds of labour-intensive work; (2) Social and cultural attitudes, values and habits which inculcate in women behaviour patterns conducive to such labour-intensive work; (3) Women's inferior position in the labour market and lack of alternative employment opportunities in both developed and developing countries, making them "willing to work" for lower wages than men. Each of these will be examined in turn in the following sections which relate the worker characteristics outlined in chapter II to labour costs and productivity.

A. Physical Characteristics

The usual and easiest explanation for labour-intensive industries' preference for women workers, is that women have a "natural" advantage in processes requiring manual dexterity, such as sewing and assembly work, because they have smaller fingers and are experienced with needlework in the home. ^{1/} It has been argued that young women possess "keener eyesight", "more agile hands", and "more nimble fingers" than men, making them more suited to detailed assembly work. ^{2/}

^{1/} See for instance Masami Tamaoki, "The Role of Industrial Free Zones. Case Studies in Asian Countries," UNIDO ID/WG.112/30, June 7, 1972, p. 12.

"The kinds of specified labour force demanded are for instance, wiring using a microscope for manufacturing memory plane for computers, spot welding in case of manufacturing radio receivers and television sets. As a consequence, workers with good visual power and left handed workers are needed. Besides, when a condition of relatively cheap labour is added, a required labour is a young female worker in Asian Countries, where wage differential between male and female workers still exists."

^{2/} One company in the U.S.A. has said that its "secret weapon" in the competitive field of sophisticated electronics devices is the "FFM" or "fast-fingered Malaysian".

The Malaysian government itself has issued an investment brochure which includes this passage:

"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, could be better qualified by nature and inheritance, to contribute to the efficiency of a bench-assembly production line than the oriental girl?"

Thus the "higher degree of efficiency" with which women, compared to men, perform certain labour-intensive tasks has been attributed to special sex-typed physical characteristics. In one case where men and women were put to work under identical strict conditions in the electronics assembly industry, it was found that at their peak men could work as fast as women, but the yield loss (or proportion of defective output) was greater. This was attributed to the fact that men's fingers are "too big" and their movements "not delicate enough" for assembly work.^{1/} Even if it is accepted that all women are more manually dexterous than all men - and the management of the industries in question seems to base its employment policies thereon - it remains to be explained why young women are so strongly preferred. In Chapter IV this question will be dealt with.

B. Social and Cultural Characteristics

Most comments about the greater efficiency of female workers in certain labour-intensive industries combine the physical characteristics mentioned above with other characteristics which are probably the product of differential socialization and acculturation of males and females. Thus in the electronics assembly industry what is required of workers is "good dexterity and eyesight and the right kind of mental attitudes". Employers argue that women are "innately better at the intricate, monotonous, eye-straining work typical of electronics production".^{2/} Such arguments are common to all cultures and societies.^{3/} Girls are hired because they are "easy to control", "pleasant", "nice" and "co-operative". Young men "cannot sit for eight hours at a stretch", and are "too impatient and ambitious" for work which has

^{1/} Lim, L.Y.C., op. cit., 197d (b), p. 23.

^{2/} NACLA, "Electronics: The Global Industry," pp. 8 and 14.

^{3/} See for instance, Kelly, M.P.F., op. cit. (1978):

"According to maquiladora managers and promoters, women are hired because of their putative higher levels of skill and performance, because of the quality of their hand work, because of their willingness to comply to monotonous, repetitive and highly exhausting work assignments, and because of their docility which discourages organizational efforts on the part of union leaders. Men, on the other hand, are invariably described as being more restless and rebellious than women, less patient, more willing to unionize and, perhaps most importantly, less resigned to tolerate rigorous work paces and inadequate working conditions for a low wage."

See also, Cantwell D., Luce, D., and Weinglass, L., op. cit.:

One personnel manager in Asia states: "This job was done by boys two or three years ago. But we found that girls do the job as well and don't make trouble like the boys. They're obedient and pay attention to orders. So our policy is to hire all girls."

"no future". ^{1/} One firm experienced great "discipline problems" with the 300 of its 4,000 assembly operators who were male and frequently insubordinate e.g. refusing to obey female supervisors. ^{2/}

Given their differential socialization within traditional patriarchal societies, women tend to be more passive, docile and obedient to authority than men. Young women, mostly teenagers, are even more malleable and easy to discipline, being used to subordinate position in the male-dominated households from which they come. One reason why electronics firms, in particular, require a relatively high level of formal education even though this is not necessary given the low level of skills employed, is because they take it as an indicator that workers who "stuck it out" through nine or more years of schooling are more likely to be conscientious and disciplined, and better able to bear the long hours of meticulous, tedious and monotonous work on the assembly bench, than workers who dropped out of school early. At the same time, in some cases workers whose educational qualifications are higher than required are rejected because it is felt that they would become bored and dissatisfied with the work, and be always on the lookout for better job opportunities elsewhere. Personal interviews are often all-important in the job application selection procedure. Personnel managers attempt to assure that those selected to work have "suitable personalities," that is, are quiet, obedient and hardworking.

Finally, it should be noted that the rigid requirements for a labour force which is young, female, unmarried, relatively highly educated and possessed of the right personality characteristics, are variably enforced depending on the state of the labour market. Thus the age, marital status and education requirements are frequently relaxed during times of economic boom and labour shortage.

C. Labour Market Status and Behaviour

Industries which are female-intensive in developed countries are industries which are particularly amenable to redeployment to developing countries where wages are even lower than those of women in the developed countries. In addition to having lower wage rates than male workers, the physical, social and cultural characteristics previously discussed tend to make women more productive than men in these labour-intensive industries. Contrary to the neo-classical economic principles of marginal productivity factor pricing, we have a case where

^{1/} Lim, L.Y.C., op. cit., 1978 (b), pp.13-14.

^{2/} Ibid.

more productive workers are actually paid lower wages. Whereas in the developed countries employers justify paying women lower wages on grounds of their inferior labour market behaviour and lower productivity, in the developing countries they employ women in redeployed industries on the grounds of their greater productivity vis-à-vis men, as well as the fact they can pay them lower wages. Women's comparative advantage in redeployed industries is based on the lower unit labour costs of production (higher output at lower wages) which may be achieved by employing women instead of men.

These wage and productivity differentials need to be explained. Women's status in the labour market in developing countries resembles that of women in the developed countries. They are traditionally based in the home, and have few opportunities for paid employment outside the home. Occupational segregation by sex tends to be more widespread and rigid in developing countries, because of rigid sex-role stereotyping and taboos, strict segregation of the sexes in traditional societies, and the lack of sufficient employment opportunities for men, who are considered to be the main bread-winners. Thus the wage employment opportunities for women in developing countries are even more limited than those of women in the developed countries; consequently their wages are even lower.

Employers, society and even the women themselves usually assume that women have limited financial obligations and career aspirations, since they will eventually leave work to marry and have children. This justifies giving women jobs with no prospects for advancement, and excluding them from training for more skilled jobs with better promotion possibilities. It also justifies giving them monotonous, repetitive jobs since it is assumed that they will work at them for only a short time.

The reportedly higher turnover rate of women than of men in developed countries is often considered to be a liability to employers, and one they are justified in overcoming by paying low wages and refraining from training women. In export industries relocated to developing countries, however, high turnover may, up to a point, be beneficial to employers and provide a further reason for their preference for hiring young single women. It should be recalled that manufacturing processes redeployed to developing countries for exports to developed countries are low-skilled tasks which can be learned in periods varying from one day (pressing pants in a garments factory) to two weeks (microscope bonding of silicon chips in electronics assembly). Learning curves are short in these industries, with workers reaching the peak of their productivity, at the given technology, within a few months. Yet the wages of individual workers increase over time with annual increments, so that older workers are more costly than younger ones of roughly the same productivity. The fact that many young women are leaving to get married or have children is then well suited to the employer. However, the highly monotonous, repetitive operations and intense pace of work, inadequate working conditions and lack of opportunities for promotion also help to keep turnover high.

Since production for export is oriented to the world market, it is dependent on the economics of the developed nations, and vulnerable to their business fluctuations. This is particularly so where overseas plants or sub-contracts were established partly to absorb such fluctuations.

In societies where women have a secondary status in the labour force, it seems to be more "acceptable" for an industry which needs to lay off workers periodically to lay off women than men. This attitude is reflected in the calculation of unemployment statistics in one Asian country. Despite massive lay-offs during the 1974/75 world recession, unemployment in 1975 was actually calculated at the "full employment" rate of 4.5%, since it excluded "discouraged workers", mostly women who ceased to actively look for work because no work was available. Migrant workers also form a convenient reserve army, since they are often the first to be laid off when a recession hits, are not counted in unemployment statistics because they are not in the citizen labour force and are repatriated to their home countries when they lose their jobs. About half of those laid off during the 1974/75 recession in one Asian country were migrant workers in industries, the vast majority of them women. ^{1/}

Those industries which so far were relocated or sub-contracted to developing countries to manufacture for export back to the developed countries tend to be more vulnerable than other industries to world economic fluctuations ^{2/} and to changes in consumer taste in developed countries. These industries therefore tend to have a chronically unstable pattern of employment. This could mean that - due to the weak position of women in the local labour markets - the prevailing short-term and insecure character of female employment in these industries is further accentuated and might be used as a permanent "comparative advantage" in the world market.

D. The Role of Host Governments

What role have host governments in developing countries played in the employment of women in redeployed industries? On the one hand, many governments seem to have anticipated that redeploying industries would overwhelmingly employ female labour, and even encouraged the entry of women into the wage labour force in a number of ways. Thus a government investment brochure specifically mentioned as an attraction of that country for foreign investors the characteristics of the female labour force. Governments tend to remove existing "protective" legislation prohibiting night shift work for females in recognition of certain industries' need for twenty-four hour operations. In certain cases governments also established housing

^{1/} Heyser, D., op. cit., 1979/1980.

^{2/} See, for example, Lim, L.Y.C. op. cit., 1978 (a).

estates for the working population, especially the female labour where export manufacturing industries are located. On the other hand, governments in many cases, especially in the initial stages of their export endeavours, were neither expecting nor particularly encouraging large scale female employment in these industries, especially since in most developing countries governments are primarily aiming at reducing the vast male unemployment rate. As was pointed out above, however, the concerned industries generally do prefer to hire women rather than men in the direct production and operator jobs. In their attempts to get more male workers employed, governments induce companies to establish other types of production in which primarily male employment would be expected to be generated. However, it should be noted that relocation to developing countries for export purposes of labour-intensive industries is in the main motivated by the availability of cheap unskilled and semi-skilled labour.

IV. IMPACT OF EMPLOYMENT IN REDEPLOYED INDUSTRIES ON WOMEN WORKERS

A. Social Origins and Aspirations

The social origins of women workers in redeployed export-oriented industries vary by country, and by location within countries. In Singapore and Hong Kong, the majority of factory workers are of urban working-class origins, though a sizeable minority in both countries are recent migrants. In Singapore, 15 per cent of the total labour force and a higher proportion of those in the manufacturing sector are migrant workers, or work permit holders. The majority of the migrants are from Malaysia, where they come from Chinese secondary urban centres and small towns, or from Malay rural farm villages. More recently, women workers have also immigrated from Thailand and other Asian countries to work in the labour-intensive factories.

In the Republic of Korea, Malaysia and the Philippines, workers' origins depend on the location of the factories. In zones close to major urban centres, most of the workers come from urban and semi-urban areas, although many also come from distant rural areas in search of employment. Where the zones are located in rural areas, e.g. as part of host governments' attempt at the regional dispersal of industry, the vast majority of workers come from surrounding farming areas. Malaysia and the Philippines have a higher proportion of workers of rural origin than does the Republic of Korea, which is more highly urbanized, and where the earliest indigenous export manufacturing industries were located in the major cities.

In the Mexican Border Zone, 70 per cent of maquiladoras workers are migrants from urban and semi-urban areas within Mexico, most of them having migrated with their families as young children in the previous generation. Only 8 per cent are from rural backgrounds.

The chief reason why young women seek employment in export-oriented factories is obviously the fact that these jobs provide income to these otherwise unemployed women. In urban areas like Singapore and Hong Kong, most working families require more than one wage-earner to maintain a minimum or slightly more comfortable standard of living. Daughters are sent out to work to help support their families, to meet payments for necessities and for improved standards of living which many urban families in developing countries have come to expect from their countries' development. In the predominantly Chinese countries of Singapore and Hong Kong, older daughters tend to be especially sent out to work to provide for the education of younger siblings, particularly sons, whose higher education represents the family's main hope for upward mobility. Often the working daughters' own education is therefore cut short in order that they may seek employment to fulfil family needs.

Also, high unemployment and the lack of jobs for males, has generally forced many women to take on wage labour in order to partially or totally support their families. One-third of the workers surveyed in one study done in Malaysia in 1973 had at least one member of the immediate family seeking employment, of whom two-thirds were males and 60 per cent had been out of work for a year or longer.^{1/}

In the Mexican Border Zone, nearly one third of the women who work in the textile and garment manufacturing sector are heads of households and sole providers of income for their families. Where males are present, they often earn too little to support their large families.^{2/}

Given the economic need of women in developing countries for wage employment, what determines their choice of factory employment in particular? In the Mexican Border industries as many as 40 per cent of the workers who had been previously employed had worked in the white-collar and services sector, where their wages as clerks, secretaries, cashiers, salespersons, etc. were lower than the wages of assembly workers, and comparable with the wages of domestic servants. Thus work in the factories represents a step up in the occupational ladder, to higher incomes and benefits.^{3/}

The situation is quite different in the Asian countries. White-collar employment generally pays higher wages than factory jobs, but it is scarcer. In Malaysia, women who have graduated from secondary school prefer to work as nurses, schoolteachers and clerical workers, but such job opportunities are very limited. Even where certain jobs in the service sector, such as sales and hairdressing, pay lower wages, they are preferred to factory employment because of the stigma attached to factory work in certain countries. Indeed, in Singapore, where service sector jobs are plentiful, factories which are short of labour generally seem to find it difficult to hire women even at higher wages.

For Asian women, factory work offers a major opportunity for income, greater independence and better futures. But those who have the requisite qualifications keep looking for jobs in the white-collar sector, while those who have not finished high-school may go to night-school and study while working full-time in the factory in order to give themselves a chance for better jobs in the future. In Mexico, on the other hand, young women seem to strive only to achieve the minimum educational qualification required to work in the maquiladoras. Nearly all women expect eventually to leave the labour force to marry and have children.

1/ Von der Mehden, op. cit.

2/ Kelly, op. cit.

3/ Ibid.

B. Employment and Mobility

Labour force participation rates of women have increased dramatically in some countries because of industrial redeployment. Unfortunately, information is available for only a few countries. In Hong Kong in 1971, 56.4 per cent of females between the ages of 15 and 19 were employed, of whom 82.5 per cent were in manufacturing industries; 88 per cent of females between the ages of 20 and 24 were in the labour force. In Singapore, female labour force participation rates rose from 10 per cent in 1968, when export manufacturing was first introduced, to more than one-third a decade later. The size of the female labour force increased by half between 1970 and 1974, compared to an 8 per cent increase in the male labour force. Female employment increased by 72 per cent in these few years, while male employment rose by 13 per cent, and women accounted for two-thirds of the total increase in the labour force. 85 per cent of unmarried women and 63 per cent of married women without children, between the ages of 20 and 29 were employed, as well as 50 per cent of mothers over the age of 40. In Malaysia, 36 per cent of all women are employed; they account for one-third of the total labour force and over half of the labour force in manufacturing.

Job mobility is restricted for women workers in export manufacturing industries. The vast majority of them are employed in low-level jobs with no prospects for upward mobility because of the unbalanced job structure in these industries. Men are preferred for the few skilled jobs available. At the same time, women learn few, if any, transferable skills - most of their tasks as operators can be learned in one day to two weeks, and may be industry- or even firm-specific, as in electronics assembly. Thus the experience gained in factory work does not seem to enhance their prospects of obtaining other kinds of employment. In these circumstances, "job-hopping" from one factory to another in the same industry and same line of work is often the only way in which a worker can hope to better her employment conditions. Unskilled workers are interchangeable between tasks and industries. In some cases, however, even this limited degree of horizontal mobility may be lacking, for example, in recession when alternative jobs are hard to find. Also, it has been occasionally noted that companies have colluded with each other to discourage factory-hopping in the Free Trade Zones, by "blacklisting" workers who leave one factory in search of a better-paid job in another.^{1/} The accumulation of seniority and accompanying higher wages and benefits is another barrier to horizontal mobility, except in times of extreme labour shortage when firms are willing to "poach" workers from each other. In some countries, migrant workers are further prevented by their work permit restrictions from changing jobs for three years.

^{1/} Lim, L.Y.C., op. cit., 1978 (b), p. 16.

Job security is also tenuous in many branches of export manufacturing industries, where employment is highly unstable and temporary or permanent lay-offs are common. During the 1974/75 world recession, for example, half of the 40,000 workers in Mexico's maquiladoras were laid off. Three-quarters of the 17,000 workers who lost their jobs in Singapore were women.^{1/} There are also significant lay-offs in textile and electronic factories in other Asian countries. In the Philippines, one small survey showed that half of the workers interviewed had been laid off in 1975 for periods ranging from two weeks to nine months. For the worker who is laid off, re-hiring at the end of the recession is by no means assured. New, younger workers are preferred, and even if re-hired, the experienced worker is often paid only the starting wage. In some countries, lay-offs are a response to more than cyclical market fluctuations. Companies may reduce their labour force or even close down because they are shifting to new, cheaper locations. This has happened, for example, with the shift of some processes and enterprises out of Mexico to the Far East in the early 1970s, and in Singapore, where rising wages have caused labour-intensive industries to move some of their processes to Malaysia and Indonesia. Thus for some countries, at least, employment in foreign-controlled, footloose industries is not only cyclically unstable, it may be also uncertain in the long run. However, this shifting of location of labour-intensive industries is obviously a reflection of the national development and diversification of industry and hence of the country's restructuring process. The danger is that the adjustment costs of this process are solely charged to female labour and that no provision is made for absorbing women in this long-term process.

The described relatively high voluntary and involuntary turnover naturally affects average duration of employment in the foreign, export-oriented industries in developing countries and, in particular, women workers. In the developed countries, the average work-life of a woman in these labour-intensive industries is about ten years; in Mexico it is six years, the Republic of Korea seven years, and in some of the South-East Asian countries less than two years. Women who leave work to get married and have children, find it very difficult to get jobs later, for example, when they have had a couple of children and need to re-enter the labour force in order to support their families. Most employers seem to be against hiring married women with children because of the need to pay maternity benefits, and because they believe that married women are more unreliable workers, e.g. with respect to absenteeism and turnover rates.

On the other hand, some employers prefer married women because they are "more stable" since they must work out of dire economic need (otherwise, given strong traditional role-orientations, they would not), will not leave on getting married, and have fewer alternative job opportunities to induce voluntary turnover.

^{1/} Heyser, op. cit.; Selangor Graduates Society, "Plight of the Malaysian Workers in Singapore", 1978

C. Income and Expenditure

As previously discussed, the wages earned by women workers in labour-intensive export industries are usually lower than those of equivalent male workers, and below the minimum budget requirements for a family in most places. Beyond this, there are considerable variations in income and expenditure patterns according to country, industry and individual. In particular, expenditure patterns vary according to whether the worker lives at home with her family, or in a dormitory or rented accommodations near her place of work. Workers who live at home contribute more of their income to their families. In Hong Kong, a 1970 survey of 660 young factory workers aged between 14 and 21 showed that 40 per cent of them gave all of their incomes to their families, while 88 per cent gave at least half. In Malaysia, most electronics workers give between 25 per cent and 60 per cent of their incomes to their families. In Mexico, maquiladora workers on the average contribute more than half of their weekly earnings to the support of their families. The average dependency ratio for electronics workers in Malaysia and the Republic of Korea is one, while in Mexico it is much higher because the vast majority of maquiladora workers live in large family groups who rely heavily or solely on their incomes to survive.

Even a single working woman has considerable expenses to meet out of her wages. She has to pay for rent and food, which can often be exorbitantly priced in the area around the industrial locations. Transportation is another major expense, both for those who live at home, far from their place of work, and for those who live away from home but visit their families regularly. Clothing and other necessities take up most of the remainder. For women with starting wages there thus seems to be little left for recreation or savings for marriage or for further education. Indeed, a recent study of women workers in American electronics plants in Asia shows the ratio of starting monthly wages to monthly expenses (basic rent, food and transportation) in a number of countries. In Indonesia this was 74 per cent, in the Philippines 108 per cent, in Malaysia 126 per cent, and in Hong Kong 110 per cent. After two years' employment, the ratio of monthly wages to expenses changed to 113 per cent in Indonesia, 203 per cent in the Philippines, 222 per cent in Malaysia, and 152 per cent in Hong Kong. In 1979, the average monthly wages of a woman electronics worker who had been working for two years were U.S. \$ 30 in Indonesia, \$ 75 in the Philippines, \$ 100 in Malaysia, and \$ 187 in Hong Kong. Any surplus over the basic subsistence needs is contributed to the family.

D. Working Conditions, Health and Welfare

Generally speaking, working conditions seem to be better in electronics than in textile and garments factories, and better in large transnationals than in small domestic factories. In all observed countries, government regulations exist on the hours and conditions of work, but they are often either lax, or are not obeyed or enforced. Given poor working conditions, especially in the textile industry, health and safety problems abound. Respiratory diseases, eye and stomach problems and nervous disorders are said to be common. Hearing impairment and the inhalation of textile dust are common problems.

Workers usually prefer working in electronics than in textile or garment factories. However, it should be noted that the Occupational Safety and Health Administration (OSHA) in the U.S.A. has placed electronics on its select list of "high health risk industries using the greatest number of hazardous substances". The health and safety problems are numerous and serious. ^{1/} Eye complaints are common in the electronics assembly industry. One survey in an Asian country found that most workers in this sector developed severe eye problems within the first year of employment: 88 per cent had chronic conjunctivitis, 44 per cent became near-sighted, and 19 per cent developed astigmatism. Similar results have been obtained in studies in other countries. A 1975 survey of workers in an American firm in Asia found that 44 per cent complained of deteriorating eye-sight and 42 per cent of headaches, caused by eye-strain from looking through highly magnified microscopes for seven to nine hours a day in the bonding process.

The commonly used solvents in the electronics assembly industry are suspected of being carcinogens. Metal solder fumes may cause shortage of breath, nausea, reproductive problems, kidney and liver damage and cancer. The health risks become acute where there is an absence of adequate protection and workers are not trained or informed of the dangers of working with chemicals.

A third source of health problems is the practice of rotating shift work every week or every two weeks in factories which are operated twenty-four hours a day. whereas in the U.S.A. studies have found that rotating shifts are destructive to workers' health, shifts are frequently promoted by companies located in developing countries. There are indications that in some cases married women are permanently hired on the late-night shift and do house-work and care for their families in the day, while working in the factory at night.

^{1/} The Electronics Safety and Health Organizing Project, Pacific Studies Center, Mountainview, California; and other sources.

Finally, the fast pace and intensity of monotonous, repetitive assembly work in the tense and rigidly disciplined environment of export-oriented electronics factories aggravates nervousness and stomach ailments, while forced overtime and production speed-ups increase fatigue and the likelihood of accidents. The intensity of work undoubtedly contributes to the high turnover rates. The rates are about 5 per cent and 10 per cent a month in normal periods and as much as 50 per cent in peak periods of labour shortage during economic booms.

In the developing countries labour in general is weakly organized; organization of female labour is almost non-existent, given their high turnover rates, lack of work experience, and passivity. Male-dominated national unions have also frequently been disinterested in organizing female workers. Given this lack of organization, it is not surprising that labour action to improve wages and working conditions is rare. Yet, in spite of the constraints facing them, labour actions do periodically occur among female workers even among unorganized workers.

Strikes by women workers in foreign textile, electronics and other factories have been reported from several countries. ^{1/}

E. Living Conditions

Because of low wages, living conditions of most women workers in export manufacturing industries can be classified as poor. Inadequate housing is perhaps the biggest problem. Since workers are drawn to the export manufacturing zones from a wide radius, many if not most of them have to seek rented accommodations in the vicinity of their work. Few factories provide dormitory space for workers, and where they do it is likely to be crowded, with bed rotation paralleling shift rotation.

Rented accommodation is often difficult or expensive to obtain, especially where the industrial zones with their concentrated employment of as many as 20,000 women in one zone are located in rural areas. Around the zones, workers are therefore forced to pay exorbitant rents for "deplorable" housing conditions. Even where workers live at home, poverty may mean that living conditions are poor.

^{1/} See Report by Denis Gray, The Oregonian, March 15, 1976, and also, for example, American Friends Service Committee, "Women Workers: South Korea", Hawaii, October 1978; Korea Communique, Japan Council of Churches; A letter from Church Women in Korea; Roose, op. cit., Shim Jae Hoon, "Letter from Seoul", Far Eastern Economic Review, April 14, 1978; materials from the Institute on the Church in Urban-Industrial Society, Bibliographic Series N. 4, 1978, Chicago; Matsuo Kei, op. cit.

F. Demographic Behaviour

The creation of mass female employment opportunities in industries has a significant, if not profound, impact on the demographic behaviour of the young women who work in the factories.

The pattern of women's job and marriage cycle is still largely traditional. It is common in the countries observed that a girl usually begins factory work around age 17, stays at work for 6-7 years, and when she marries around 24 years of age, enters into full-time housewife-motherhood. In certain cases, however, workers in the export manufacturing sector may find their marriage opportunities limited because of the extreme sex imbalance of workplace environments, making it difficult to meet and socialize with members of the opposite sex.

There is some evidence that the experience of wage employment tends to reduce the number of children which a woman has, especially where active public family planning programmes are in operation, as in most of the Asian countries. The later age of marriage in itself would tend to reduce the number of children per woman, and economic pressures reinforce this. When a married woman has to go to work to help support her family, she can afford to have fewer children because she has less time to care for them. Studies in Singapore and Hong Kong show that the desire for upward economic and social mobility is the main motivation for women workers to reduce fertility and family size. This they do not only for job-related reasons but also because they wish to devote savings to bettering the family's standard of living and the children's future prospects.

On the other hand, married women whose husbands can support them often leave the work force because they find that low wages do not compensate for the costs of their working, including private child-care costs, lunch and transportation expenses. When wages increase, they are more likely to stay on the job. Thus, while low wages of men tend to force married women back into the labour force, low wages of females tend to keep them out of it and in the home. In addition, evidence shows that the possibilities for women who wish to re-enter the labour force after marriage and childbirth are limited by company practices. These women seem to be handicapped by age and family responsibilities.

Employment in female-intensive industries has also generated massive migration flows of young women in developing countries. In Latin America already, a majority of migrants are young women, who migrate to seek wage employment to support themselves and their families. In certain Asian countries large numbers of young women migrate alone or with their families from rural areas to big cities and the industrial zones where they find employment.

In Singapore perhaps as much as half of the female manufacturing labour force consists of migrant workers from Malaysia, Thailand, Sri Lanka and Bangladesh. They tend to be a more stable and productive labour force than native Singaporeans, because of the insecurity of their position as foreign workers, and restrictions of their work permits. Generally, the situation of immigrant female labour seems to be particularly insecure and hard.

G. Social and Cultural Behaviour

Women workers in the observed industries are subject to a number of different social and cultural influences which affect their later behaviour. First, there is the impact of the factory culture itself, some aspects of which resemble traditional culture, and other aspects, some of which are quite different and require a major adjustment too.

Where workers come from predominantly rural backgrounds, their values are likely to be those of a more leisurely, co-operative life with economic and social relations centred on the family and community, rather than on the individual worker. So a variety of incentive measures are frequently seen necessary to be enacted in the factory to instil habits of punctuality and diligence.

On the other hand there are values of traditional society which can enhance workers' productivity in the factory, such as obedience to (paternal) authority, hard work, honesty, discipline and self-denial. ^{1/} Women accept their subordinate position at the bottom of the factory hierarchy, as they do in traditional patriarchal societies.

A major source of social and cultural influence on young women workers is their living away from home in urban or semi-urban areas, where they are exposed to many kinds of "modern" i.e. Western, influences. Away from family and social controls, and subject to peer groups, mass media and factory culture influences, many young women exercise their new-found personal independence in a way which arouses the antagonism of conservative local communities. Workers' morality has, in some countries, become a hot issue for local community leaders, women's groups, welfare organizations and politicians.

Thus it is difficult to tell whether the local community's antagonism to factory girls is original, or merely a reaction to the life-style and behaviour which some of them adopt while working in foreign factories. What does happen is that in some areas factory work gives women a "bad name". As "girl labourers" they are "despised", and their social status degraded rather than enhanced by their employment in manufacturing industries. It is argued

^{1/} Lim, L.Y.C., op. cit., 1978 (b). pp. 22-23, 35-38.

that many of these women become "misfits" when they return to their home communities. If they do return, and find it difficult to obtain decent marriage partners.

But in patriarchal societies and cultures which have conservative traditional attitudes towards women, and generally confine them to the domestic economy and in non-monetized productive activities such as subsistence farming, the provision of wage employment away from the home and family may be viewed by the women themselves as a "liberating" experience. They are granted a measure of economic independence, personal freedom, access to a wider range of life experiences and activities, and an expression of individual identity - all of which they never had before and which they value. ^{1/} Similar conclusions have been drawn from studies in other Asian countries. In some of these, working women's position in their families is somewhat improved: they have more freedom and are allowed to make more decisions, although still subordinate to family authority for the most part.

The net result of positive and negative social effects of women's work in redeployed industries cannot be estimated without more research, in particular, research which follows the women and their communities through and past the period of their employment in export-oriented industries.

H. Summary

Women who work in foreign, export-oriented industries come from both urban and rural social origins, and seek wage employment in industry because of the economic need to support themselves and their families. Such employment gives them low wages which nevertheless make an important contribution to family support in many cases. Where the wages earned are above subsistence, the women and their families may enjoy some improvement in their low standards of living. However, the employment provided in most foreign export industries is in low-skilled jobs which promise no vertical and little horizontal mobility. The jobs are unstable and insecure because of the vulnerability of these industries to cyclical market fluctuations and long-run market and technological changes. In addition, employers prefer young unmarried workers and older workers are often laid off and find it difficult to enter or re-enter the factory labour force, even at lower wages. Working conditions are poor in the textile and garments industry especially, but serious health hazards exist in the

^{1/} The following quote from a study in the Philippines indicates this:
"The fact that many of the workers were living away from home and earning an independent income for the first time gave them a new degree of social freedom which they valued highly. They had chances to meet new friends and participate in new activities; they purchased small personal items; they gained satisfaction by supporting themselves and helping their families. A zone job gave women workers the possibility to prolong their independence by delaying marriage and child-bearing."

electronics assembly industry as well. Voluntary as well as involuntary turnover rates are high, and the employment generally lasts only a few years. The benefits women derive from their employment are thus only temporary.

Labour organization among women factory workers in developing countries is minimal, and labour movements are often repressed. Yet there are incidents of labour action in support of wage and working condition demands. Living conditions outside the factory are generally poor, the main problems in most countries being inadequate and costly housing and transportation facilities.

Female employment in industry may lead to delayed marriage and smaller families for women workers; it also induces long-distance and sometimes international migration of young women. They are subject to various social and cultural influences both inside and outside the workplace, which affect their life-styles and behaviour patterns. While factory employment gives the women some valued personal independence and freedom, their new behaviour is often resented by local communities. Social and cultural conflicts develop which may reduce rather than enhance women's social status, though their economic position is temporarily improved.

V. IMPACT OF FEMALE EMPLOYMENT IN REDEPLOYED INDUSTRIES
ON DEVELOPING COUNTRIES

A. Economic Impact

The major benefit to developing countries which attracted foreign industries is employment creation, overwhelmingly for young women who are new entrants to the labour force. Thus the country's labour supply increases.

The main benefit of employment creation is income generation. The wages earned by female workers in redeployed industries may be counted as a net addition to national income because they are workers not previously employed in wage labour, so that the domestic resource cost of their employment is relatively low (although not zero). Because the earnings of female workers are lower than those of males, the national income contribution is lower. Because of high turnover rates among women workers, average earnings remain low. Most of this increased income goes to increased and improved basic consumption of necessities, such as food, clothing, housing, transportation and education. If the domestic market for manufactured consumer goods is not considerably increased, growing pressures of demand on certain necessities like housing and transportation may lead to shortages and localized inflation. Thus, especially around Free Zones, where mass employment is concentrated in a small geographical area, most of the multiplier effect of workers' incomes and expenditure may be absorbed in local inflation.

Another possible benefit to the host country is skill creation and learning. Because women workers are employed in largely unskilled or semi-skilled occupations where "skills" can be learned in less than two weeks and are of limited transferability, the human capital contribution of these types of redeployed industries is minimal. In many countries, the women have higher educational qualifications than average workers and citizens, and are probably being underutilized as factory operators. While it may be argued that at a minimum workers learn modern factory discipline which should enhance their productivity in other factory jobs, in most cases there are few other factory jobs available for women. After their short tenure in the export manufacturing industries, they usually experience a downward mobility in wage employment, returning to low-productivity jobs like domestic service, petty trading etc.

On the other hand, the increased labour force participating of women may be viewed as an asset to a country since it increases the available supply of productive resources. This is particularly important in those countries which are experiencing labour shortages. It may also be argued, however, that prolonging a cheap-labour competitive advantage may be self-defeating, since it delays the transition to a more capital- and skill-intensive productive base. Thus Singapore, for example, is currently raising wages to squeeze out labour-intensive industries and attempting to attract more highly-skilled and productive enterprises.

The mass employment of women has various demographic consequences for the host country. While the rise in age of marriage and fall in family size is welcomed by poor countries anxious to reduce their population growth rates, the increased migration to urban and semi-urban areas adds to existing rural-urban migration flows, and contributes to excessive growth of cities. Research is needed to find out the post-employment residential pattern of women workers i.e., whether they return to their place of origin e.g. in the countryside, or remain in the cities where they work. Impressionistic evidence seems to suggest that they tend to remain in urban areas.

The poor health, working and living conditions of most factory women means that the host countries eventually have to bear some of the externalities or social costs of employment in redeployed factories, in terms of burdens on public health and medical facilities. Increased public expenditures may be required on housing and transportation services, which add to the costs which the governments already incur in subsidizing the foreign industries through the construction and maintenance of industrial estates, and the opportunity cost of tax revenues forgone in the exemptions from tariffs and taxes which these industries enjoy.

B. Social Impact

The large-scale entry of women into the labour force is usually considered to be progressive social phenomenon, and one which has occurred in all the developed countries. It is argued that paid employment enhances the economic and social position of women, and contributes to equality between the sexes.

Undoubtedly there are positive social effects from the employment of women in industry, including foreign redeployed industries. Women's economic position is temporarily enhanced, and they enjoy new social freedoms and greater independence. They develop certain progressive social attitudes, such as the desire to have fewer children, and the desire for upward social mobility. To the extent that they also imbibe certain of the "modern" values of the factory - such as discipline, punctuality, competitiveness and responsiveness to individual monetary incentives - and transmit them to the new generation through their responsibility for child-rearing, there may be a positive "developmental" impact on society in the long run. However, in many industries in developing countries today, the low wages and poor working conditions of female employment tend to reduce its beneficence.

While industrialization always brings with it social tensions and conflicts, the employment of women in foreign dominated industries in developing countries seems to generate open or potential multiple conflicts. First, there are conflicts between traditional local communities on the one hand, and the women workers, their employers and the host government on the other, regarding the desirability and necessity of factory jobs, especially for women. Second,

there are the increasing conflicts between the women as workers on the one hand, and their employers and governments on the other, over the conditions of employment and labour organization and action. Third, there are potential and actual conflicts between the sexes on many levels. Unemployed males may resent the employment of females, feeling that this constitutes their own employment opportunities and lowers the general wage level; thus, for example, male-dominated unions are often hostile to organizing female workers. Family relationships may be affected as women increasingly become important or sole supporters of the family, since they can obtain jobs while men - fathers, brothers and husbands - remain unemployed.

VI. SUMMARY ANALYSIS AND POLICY IMPLICATIONS

The employment of women in redeployed industries can be analyzed and evaluated only in the context of the total phenomenon of industrial development in developing countries. It has been argued above that industries which redeploy to developing countries for export purposes are labour-intensive industries with a pressing need for low-wage labour to maintain their profitability in competitive international markets. It is this need for the cheapest available unskilled labour which has caused them to employ, first, women in the developed countries, and then, young women in developing countries.

The consequences of such employment for the women workers are mixed. In most countries individual workers benefit from short-run economic gains in the form of the wages they are paid in a relatively brief period of employment. This gain is sometimes obtained at the cost of generally poor working and living conditions which present short- and long-run health and safety problems that are largely uncompensated. Social and cultural changes occur which have both positive and negative impacts on the women.

It should be emphasized that the reasons for and the consequences of female employment in redeployed industries are intimately related. To attract foreign industries, host governments frequently not only subsidize their capital costs, but also ensure that labour costs of production are low. It should, however, be noted that economic and social conditions in large foreign dominated companies usually are better than in smaller indigenous companies. In that sense it could be said that the comparative advantage of women as workers in these industries is based on their comparative economic and social disadvantages in host developing countries.

Quite evidently, governments in some cases did not expect foreign industries to wish to employ mostly women. In other cases however, governments both recognized and encouraged this. In the latter case, the employment of women appears to be seen as a means of hastening industrialization, of generating employment and earning valued foreign exchange through the export of manufactures.

How has the employment of women in redeployed export-oriented industries benefitted the economies of host countries? First, it seems that national economic gains have been made although low wages mean low value added and low foreign exchange earnings and externalities and social costs in the form of health losses and social and cultural disruption may reduce these gains. Net national economic benefit in the short-run could be increased if the conditions of women workers were improved, for example, through raising wages, or ensuring longer terms of employment so that average wages, and thus domestic value added and foreign exchange earnings, would

be higher. The problem is that if average wages were raised, the host country might run the risk of losing the investment of foreign export industries in the particular type of labour-intensive activities.

It should be re-emphasized here that export oriented industries in developing countries tend to have highly competitive market structures. Thus any one firm would be reluctant to unilaterally initiate higher wages as higher costs of production would hurt it in market competition. This is particularly true in the garments industry where there are numerous firms world-wide, and entry into the industry is relatively easy, given low capital and technology requirements. In some of the Asian countries, especially, small indigenous firms have very narrow profit margins and frequently close down, becoming "fly-by-night" operations. But this argument of competition and pressure on profit margins can be exaggerated in the case of the industries (such as the international electronics industry), which have a more oligopolistic market structure and whose overseas operations in developing countries are therefore very profitable.

Though such companies may have the wherewithal to improve wages and working conditions for their workers, they lack the incentive to do so. Thus a first major area of policy concern for host governments would be the improvement in the conditions of women workers. Such improvement can take many forms. Governments can remove restrictions on labour organization, enact more favourable labour laws e.g., with respect to wages and hours of work, impose regulations on health and safety, set up institutional arrangements to reduce high turnover among women workers e.g., through better wages and working conditions, and public child-care facilities so that married women and mothers can continue working. While it may be argued against such measures that they intervene in the free working of the market and would slow down industrial redeployment, it should be noted that large-scale industrial relocation to developing countries has not been entirely the result of unaided free market forces - host governments have established numerous incentive policies to increase the gains for industrial investors. Intervening in the market on behalf of labour has its precedent in interventions on behalf of capital, and furthermore could result in higher national economic benefits.

The constraint which makes host governments unwilling or unable to enact policies which would improve the conditions of women workers is a fundamental feature of such industries which are highly mobile, or "footloose", from country to country. Indeed, host governments seem to compete with each other to offer favourable conditions to these industries rather than better working conditions for labour. There is a risk that reversing course by attempting to improve the wages and working conditions of women workers may simply drive these industries away to more "co-operative" locations.

The competition between developing countries also makes it difficult for the governments of countries at different stages of development to agree on international co-operation to improve the conditions of women workers in foreign industries and to prevent footloose industries from evading regulations by relocating. Any country which did not abide by such agreements would become relatively more attractive as a site for foreign industries. Hence, there is an obvious need for efforts to conceive suitable international and/or regional agreements in this regard.

Given existing conditions in the economies and labour markets of developing countries, there are positive aspects to female employment creation in foreign industries. Employment for women in these industries, even if it is based on their inferiority and lack of bargaining power in the labour market, does increase women's opportunities for work outside the home, and female employment creation per se should be an explicit goal of host governments, to ensure that women do benefit from development programs. There are external benefits as well as external costs to host countries from mass female employment e.g. as in the largely unanticipated favourable demographic consequences, the prospect of accelerated social and cultural modernization (which also has both a positive and a negative aspect). But the mere creation of female employment without attention to its social consequences may lead to anti-progressive reactions. For example, where local communities exposed to the mass employment of young women workers in re-deployed industries develop attitudes opposing industrialization, female employment in general, and foreign plants in particular.

Further research is required to specify the long-run effect of employment in redeployed labour-intensive export industries on women workers and on host societies. In the meantime, a most urgent priority for host governments and development planners is to search for better employment opportunities. The creation of alternative opportunities in itself would tend to improve conditions for women workers by increasing their bargaining power and forcing employers to behave competitively in the labour market. It is most important that, in the process of designing alternative employment opportunities, both men and women are given equal access to training, skills and jobs which can improve their economic position. The large-scale entry of women into the labour force, although an unintended by-product of industrial redeployment to developing countries, should continue and should be encouraged, albeit under more favourable labour market conditions than presently exist in these countries.

Successful industrialization in developing countries can, in itself, go a long way to ensure these objectives. As industrialization and economic growth proceed, the industrial structure adapts towards more skill and capital-intensive activities thus creating employment opportunities for higher skilled men and women. A number of problems would, however, seem to arise. First, there is the danger that government preoccupation with male employment creation would only reinforce women's inferior position in the labour market and their role as cheap unskilled labour, e.g., by excluding them from access to training for and jobs in

typically male-intensive industries where wages are higher. Women must be included in the general upgrading of skills. Second, it is likely to be more difficult for a developing country to persuade these higher-value-added industries to locate in their country than in the case of "classical" labour intensive industries. The incentive for more advanced industries to locate in developing countries depends on several factors: if the industries are to serve the local market, the development of a consumer market in these countries is essential. Again, this is dependent on the achievement of successful economic growth and an equitable distribution of the resulting gains in income. If the more advanced industries continue to look to serve world export markets, then the decision to locate and invest depends primarily on the availability of infrastructure, an educated and unskilled work force and the relationship between the wage level and the level of productivity. This latter aspect illustrates the dilemma facing countries pursuing equitable economic growth: to attract footloose export-oriented industries requires their country to offer some advantages over others. Therefore to gain the investment necessary to generate growth - and ultimately higher wage levels - the wage/productivity combination must be competitive. Wage levels, at least initially, may need to be held down until skill and productivity levels begin to rise. There is thus a clear conflict between equity to the current generations of workers and equity to the future generations.

In addition, to encourage more advanced industries into the developing countries may require heavier investment incentives than those already offered to labour-intensive industries. Such incentives, e.g., longer tax holidays and other capital subsidies would correspondingly reduce net economic gains for the host country. A detailed cost/benefit analysis would therefore be required to assess the feasibility of establishing far-reaching incentives for these industries. To this end individual developing countries need to have a realistic perception of the objectives and constraints of long-term industrial development and on this basis, (i) upgrade the skills of women for these changing requirements, and (ii) more explicitly direct the inflow of foreign resources to industry.

The initial phase of industrialization through the redeployment of export-oriented labour-intensive industries has encouraged a new group of workers into the work force. In this current stage these young women comprise a new class of low paid workers with short-term and fluctuating employment. The challenge to policy makers and administrators in the developing countries is to ensure that this pattern does not continue into the next stage of development and that women share the benefits as well as the costs of economic growth.

A N N E X

The major sources and references for Chapter II.3 and the following sections are listed below by country group:

- Mexico: Kelly, op. cit. (1978); NACLA, "Electronics: The Global Industry" (1977); NACLA, "Hit and Run: Runaway Shops on the Mexican Border," July-August 1975.
- Philippines: Snow, op. cit. (1977); Robert Snow, "Some Critical Thoughts on the Social Impact of Multinational Corporations in Asia and A Case in Point: The Labour-Intensive Factory," 1978 (mimeo); E. Paglaban, "Philippines: Workers in the Export Industry," Pacific Research, Vol. IX Nos. 3 and 4, March-June, 1978.
- Malaysia: Lim, op. cit. (1978 (a)); Linda Y.C. Lim, "Women Workers in Multinational Corporations: The Case of the Electronics Industry in Malaysia and Singapore," Michigan Occasional Papers No. IX, Women's Studies Program, University of Michigan, Ann Arbor, 1978 (b); Myra L. Blake, "Towards a Better Deal for the Young Worker," Federation of Family Planning Associations report, Malaysia, May 1975; Fred R. Von der Mehden, "Industrial Policy in Malaysia, a Penang Micro-Study," Occasional Paper of the Programme for Development Studies, Rice University, Houston, June 1973.
- Singapore: Noeleen Heyser, "Female Rural Subsistence to an Industrial Peripheral Workforce: Capital Accumulation, Technological Access and Female Malaysian Migrants in Singapore," ILO, Women and Employment, 1979/1980; Lim, op. cit. (1978 (a) and 1978 (b)); Deyo and Chen, op. cit. (1976); Frederic C. Deyo, "Marital Status, Job Orientation, and Work Commitment among Semi-skilled Female Workers in Singapore," Sociology Working Paper No. 54, University of Singapore, 1976.
- Hong Kong: Janet W. Salaff, "Working Daughters in the Hong Kong Chinese Family: Female Filial Piety or a Transformation in the Family Power Structure?" Journal of Social History, June 1976; Janet W. Salaff and Aline K. Wong, "Chinese Women at Work: Work Commitment and Fertility in the Asian Setting," in Stanley Kupinsky (ed.), The Fertility of Working Women (New York: Praeger, 1977).
- The Republic of Korea: Matsuo Kei, "The Working Class in the Masan Free Export Zone," in AMPO Magazine Special Issue, Free Trade Zones and Industrialization of Asia, Tokyo 1977, pp. 67-78; Kim Chang Soo, "Marginalization, Development and the Korean Workers' Movement," AMPO Magazine, no date; Judy Weidman, "Plight of Women Workers in Korea," Response magazine, October 1978; Shim Jae Hoon, "Letter from Seoul," Far Eastern Economic Review, April 14, 1978.

Asia: AMPO Magazine, Free Trade Zones and Industrialization of Asia, 1977; Kim Yong Bock and Pharis J. Harvey (eds.), People Toiling Under Pharaoh, Urban-Rural Mission of the Christian Conference of Asia, Tokyo, 1976; Diana Roose, "Third World Sweatshops: Asia's Silicon Valley," The Nation, August 25- September 1, 1979, pp. 142-143; Rachel Grossman, "Women's Place in the Integrated Circuit," South-east Asia Chronicle, No. 66, January-February 1979; various papers from the East-West Culture Learning Institute, Hawaii; various materials from the American Friends Service Committee Project on Women and Global Corporations and The Institute on the Church in Urban-Industrial Society (Chicago).

Other Asia: Lydia Kung, "Factory Work and Women in Taiwan: Changes in Self-Image and Status," in Signs: Journal of Women in Culture and Society, Vol. 2, No. 1, pp. 35-58; Lydia Kung, "Factory Women in Taiwan and Hong Kong," paper presented at the Association for Asian Studies Meeting, Chicago, 1978 (mimeo); J.P. Zenger, "Taiwan: Behind the Economic Miracle," in AMPO Magazine, Free Trade Zones and Industrialization of Asia, Tokyo 1977, pp. 79-91; Becky Cantwell, Don Luce and Leonard Weinglass, "Docile and Dextrous Young Women Suffer from Economic Miracle," in "Made in Taiwan," a publication for the Asian Centre, an independent affiliate of Clergy and Laity Concerned, U.S.A., no date; Linda Gale Chen, "The Effect of Industrial Employment and Management Policies on the Lives of Taiwanese Working Women," July 1977.

General: Kreye. op. cit. (1977); NACLA, "Electronics: The Global Industry" 1977.



