# Forms of production and women's labour : gender aspects of industrialization in India and Mexico

# FORMS OF PRODUCTION AND WOMEN'S LABOUR: GENDER ASPECTS OF INDUSTRIALIZATION IN INDIA AND MEXICO

I.S.A. BAUD

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Baud, Isabelle Suzanne Antoinette

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PROEFSCHRIFT

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Technische Universiteit Eindhoven, op gezag van
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door

ISABELLE SUZANNE ANTOINETTE BAUD

geboren te 's Gravenhage

krips repro meppel

Dit proefschrift is goedgekeurd door
de promotor
Prof. dr. C.J.L. Bertholet
co-promotor
dr. D. Kruijt

To my mother

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## Preface

The idea for this study has gradually emerged from my previous interest in women's productive labour and income, and the effects such work has on women's position. Although the debate on whether productive labour means only more drudgery for women or can strengthen their position still goes on, in my opinion having money 'of one's own' does provide a greater degree of choice for the woman concerned. The question is to what extent other factors pose limitations.

In Tunisia where I carried out a study on young girls working in export factories, a main conclusion was that the extent of autonomy derived from productive labour and income was limited by the patriarchal attitudes within the family/household; mechanisms within the household developed to play down the major economic contribution the girls made.

In India, my study on women working in the textile industry focussed particularly on differences in productive labour and income among the various forms of production and the implications such work had on women's position within the household. One conclusion was that the effects of productive labour and income on woman's position varied with a stricter gender division of labour in the workplace, but also varied a priori with her position within the family.

The question to what extent the results of this case study might be more generally valid was the basis for the comparison with case studies carried out by others on women's labour in agro-industry.

Many people have contributed to the completion of this study. Prof. Dr. C. Bertholet as my advisor has provided steady support throughout the whole period. Dirk Kruijt, co-promotor, did so as well; I am particuylarly grateful to him for bringing to my attention the research being done at the Colegio de Jalisco in Guadalajara, and for introducing me there.

It is impossible to thank everyone who helped me in collecting the data. Here I would like to mention only a few people, who provided major support. In India, this includes Dr. C.T. Kurien, Kalpagam, and my assistant in the field throughout the year, Dhanalakshmi. My thanks also goes to the large number of women who were willing to spend part of their very scarce free time to answer my questions. Finally, my thanks goes to the members of the women's study group of IDPAD. In Mexico, a pleasant welcome at the Colegio de Jalisco was provided particularly by Carlos Alba Vega. Luisa Gabayet Ortega provided unstinting support in introducing me to the researchers on women's position in the Colegio de Jalisco, sending materials, and discussing the issues. My thanks also goes to Elena de la Paz Hernandez Aguila and Maria Sanchez de Tagle for their permission to quote from their studies.

Several friends and colleagues read the manuscript at various stages of writing, and discussions with them did much to clear up difficult points. I particularly would like to thank Hanka Heumakers and Anneke van Luyken for their support and the benefit of their experience with working women in the Netherlands. Gerard de Groot and Olga Nieuwenhuis kindly read specific chapters of the manuscript and provided helpful comments.

My thanks goes to Rosemary Gunn for editing the English language of the manuscript meticulously, despite the often short periods of time left for this necessary work.

My husband has provided a great of support at home without which it is impossible to combine research and a household. My small son provided me with the spur to confine my attention to essentials.

Isa Baud

# PART I. THEORETICAL FRAMEWORK, RESEARCH APPROACH AND METHODOLOGY

# CHAPTER I. INTRODUCTION AND THEORETICAL FRAMEWORK

## 1.1. Introduction

Industrialization within the Third World has been characterized by the emergence of large-scale enterprises with factory production as only one among other forms of production; one which, moreover, creates employment for only a small percentage of those who work in non-agricultural sectors. Other forms of small-scale production and artisanal production are widespread, and it is often suggested, they are becoming more so. Such a multi-structured economy has important implications for the amount of employment created and the ease of access to its different components. It has been suggested that small-scale and artisanal production offer greater ease of access to employment for workers than large-scale production.

This study is concerned with changes in women's employment during this process of industrialization currently taking place. Specifically, it deals with differences in women's employment in large, small-scale and artisanal forms of production (1), and the implications these variations have for women's power within the family-based household.

The ease of access to employment in small-scale production has been little analyzed for women workers. They have usually been considered a labour reserve to be pulled into or pushed out of the labour force at will (MacEwen Scott, 1986). This is based on the assumption that women are primarily occupied with responsibilities within the household, and men are the primary wage earners. In the context of the wide-spread poverty existing in many countries this assumption is not likely to hold true. Therefore, a first question is to what extent gender plays a role in the differential access of men and women to various types of employment.

The different forms of production also differ in the nature of the work performed. Such variations are related to the production techniques used and the way work is organized. Recently there has been increased interest in the effects of changes in technology on the nature of work, and what implications this has for worker control within the workplace and trade union organization. It has often been suggested that women workers participating in the various types of economic production tend to be marginalized in comparison to men. However, both this concept and the evidence for it have been very general and contradictory. They have bypassed the specificity of women's marginalization or inclusion in employment, which appears to vary with the circumstances (MacEwen Scott, 1986: 673). In this study, I want to consider the extent to which women workers are marginalized within the different types of production units (a vertical cross-section), since it is at the unit level that conflicting interests can be most clearly seen.

In this study I concentrate on women production workers, rather than entrepreneurs or professional managers. For these women, employment and income as will be shown are not a choice but a necessary strategy for their survival and that of their children. Male family members do not earn 'family wages', nor spend all their money on support of their families. They may in fact be absent, leaving women to cope. As development not only encompasses growth, but also a more equitable distribution of income, the situation of women from working-class and artisanal backgrounds should have priority.

Looking at women's employment alone is not enough; an analysis of how employment relates to women's position within the household must be included. Here one encounters the problem of reciprocal influence between women's position within the household and her employment. On the one hand, women's responsibilities within the household constrain the types of employment to which she has access, and the kinds of household activities with which she can combine them. On the other hand, her employment and income can lead to changes in her bargaining power within the household - as reflected in the division of domestic labour, distribution of resources, and decision-making patterns. Both factors need to be analyzed to discover whether employment means only more drudgery for women workers or whether it is a means of increasing the degree of choice in their lives.

The first point is the extent to which women can combine domestic labour with productive work. Recent studies suggest that young, unmarried women with a degree of education have few responsibilities within the household, and therefore gain access to factory employment (Heyzer, 1981b: 7). Married women with children can take only those jobs which can be combined with their heavy burden of domestic labour - mainly in the various forms of 'informal sector' production and services (Heyzer, 1981b: 7).

The second point is the pattern of income distribution within the family-based household. One could say that as long as the male head of household earns a wage, a woman's wage would have only supplementary value. However, while the supposition that income is brought in in such a manner and distributed equally among household members is an ideology in industrialized countries, this occurs widely neither there nor in Third World countries (Harris, 1981: 56-57; Postel, 1983: 549-555; Barrett and MacIntosh, 1982: 66-70). First, in a substantial number of women-headed households there is no man to carry out such a task (Buvinic et al., 1983: 216-243). Second, men may not be able to earn a wage large enough to provide for their families. Third, the man may not be prepared to share the whole of his income with other family members, thus leaving women and children at a very low income level (Barrett and MacIntosh, 1982: 67-68).

The third point is the degree of bargaining power derived from productive work and income. Variations in the nature of productive and domestic work carried out by both men and women influence such bargaining power (Harris, 1981: 57). In addition, existing patterns of paternal authority both in the workplace and the household influence the extent of women's bargaining power (e.g. Elson and Pearson, 1981: 158-159; Mather, 1985: 168-172).

In order to examine these problems, I have looked at examples of women's work in several sectors of agro-industry in India and Mexico. Both countries have already gone through a notable increase in industrial production and employment, and can be considered 'newly industrializing countries' (Turner and McMullen, 1984: 6). Although the role of industry in India in terms of contribution to GNP and percentage of total employment is substantially smaller than in Mexico, the two countries show similar rates of manufacturing value added (Kirkpatrick et al., 1984: 15).

Both countries also manifest a multi-structured economy. They show a broad range of firm structures, and the contribution of small-scale and artisanal production is recognized. However, the role of the large-scale sector in Mexico is greater than in India, particularly in the extent to which it is taken into account in government policies. They are also both

geographically large countries, with a large potential domestic market for the industrial goods produced.

Agro-industry includes textiles and clothing, food-processing, and leather and shoe production. This study focusses on three sub-sectors: the south Indian textile industry, the Indian shrimp processing industry in several urban centres, and the Mexican shoe industry in one of three major centers of production. Agro-industry as a whole, in comparison with other industrial sectors is a major employer of women, both in absolute terms and as a percentage of the total work force (UNIDO, 1985a: 20-22).

## 1.2. Theoretical framework

In this study, I want to examine variations and changes in women's employment through an examination of a vertical cross-section of different forms of production, and the impact this has on women's bargaining power within the household. In order to define my research questions further, I have drawn on literature written from several perspectives. This includes literature on the historical process of industrialization in the developed countries, as well as the current process in developing countries; it also includes literature on 'gender and economics', based both on more abstract work (mainly concerning industrialized countries) and on what is currently being distilled from empirically-based studies in developing countries. These different sources of literature do not fit together well, and I will ask the reader to bear with me during a few digressions in the following sections.

A great deal of the theoretical literature concerning the role of women in manufacturing production, the combination of women's productive and domestic labour, and women's position in the family-based household is based on either the current or the historical situation in industrialized countries (e.g. Barrett, 1980; Barrett and MacIntosh, 1982; Beechey, 1982; Humphries, 1983).

Studies concerning Third World women are usually based on local case studies or analysis of census or other survey data, and have been carried out from a development perspective, with some emphasis on women's poverty (for a recent overview on India, see Kalpagam, 1986: WS59-66; for Latin America, see CEPAL, 1983). These studies have generally been exploratory in their approach and description of women's employment situations.

There has been more emphasis on women's work in rural development than in industrial development (e.g. UNDP, 1980; Ahmed, 1985; Beneria, 1982). However, there has been a certain amount of interest in women's work in industry, particularly manufacturing. Such studies have concentrated on several specific types of industrial production: export-oriented factory production, women's work in the 'informal sector', and industrial subcontracting leading to 'domestic outwork'.

Although these studies have contributed a great deal to our knowledge of women's labour, a number of problems remain. First, in most countries studies of export-oriented production in fact include only a small part of total industrial production. Secondly, most studies of the 'informal sector' focus on women's work in trading and services rather than manufacturing (IDS Bulletin, 1981). Thirdly, industrial subcontracting is usually concentrated in certain parts of a production process, and does not cover the whole.

Therefore, I would like to present a more systematic consideration of women's work in manufacturing with data collected at the level of an industrial sub-sector, where the way women are drawn into different forms of production, the extent and character of their work, and the labour relations in the enterprise can be seen directly. The following sections concern: a) the categories of labour and production forms, b) labour market mechanisms, c) the labour process, and d) the household context.

### 1.2.1. Forms of production and women's employment

To begin, a few words should be said about economic development policies, which shaped industrialization patterns in Third World countries. Since the Second World War, national planning (primarily by the state) in many Third World countries has been directed toward a model of import substitution. However, in the early seventies the limitations of this model in terms of employment generation and national income became clear (Bertholet, 1975: 24-27). At the same time, restructuring of industry in the industrialized countries was occurring at a rapid rate. A large number of Third World countries then adjusted their policies to make more room for export-oriented industrialization. The goal of these new policies was to improve the national balance of income and to generate large-scale employment in a short period of time (Evers and de Groot, 1978: 5-18).

This led to certain changes in types of production structures, and in the types of labour market segmentation. On the one hand, free trade zones were set up, where large-scale factory production took place under stringent conditions imposed by national governments. Favorable financial treatment of the companies investing in factories there was usually accompanied by restrictions on types of labour used, and degree of labour organization allowed. On the other hand, a great deal of industrial production was subcontracted out to national firms, small-scale modern and traditional producers, and various types of outworkers (Watanabe,1971; 1972). In fact, this last trend has been identified as being of prime importance in increasing the diffusion of industrial production, including employment and income, among larger groups of people than does large-scale production (World Bank, 1979: 34).

The current process of industrialization in Third World countries is characterized by a combination of large-scale capitalist factory production - which tends to be monopolistic, and is often linked to foreign ownership - and a wide range of 'small-scale' forms of production (2). Disregarding the 'informal sector' approach (3) as having been sufficiently criticized, I will consider alternative approaches which come under the heading of 'petty commodity' production.

Petty commodity production has been described principally in relation to capitalist types of production, both large and small-scale. Gerry states that it is an "intentionally vague term covering those units of production which exist at the margin of the capitalist mode of production, but which are nevertheless integrated into and subordinated to it (1978: 1159). 'Petty production' units are defined as 'enterprises lacking a strong division of labour and/or bureaucratic specialization' (Bromley and Gerry, 1979: 237). Gerry contrasts it with small capitalist production, which consists of those petty commodity producers who have successfully

made the transition to capitalist relations of production, and large-scale capitalist production, which is monopolistic and linked to foreign control (1978: 1154-1155).

Gerry and other authors (4) present similar analyses in that they emphasize that the small-scale forms of production are 'defined in terms of their relationships with the dominant forms of production and that they constitute part of a structure of dominance and dependence existing on a world scale' (see discussion by Harriss, 1982: 945-947). Common to all of them is the recognition of differences between small capitalist production and 'marginal small production', and the fact that the relationship between the large-scale capitalist sector and others is considered to be one of domination and exploitation. However, in my view a better starting point is to determine the nature of the relationship (which can vary from inputs, outputs, finances, technology), and to what extent this implies dependence. I follow Harriss in this point (Harriss, 1982: 947).

I am particularly concerned with the categories of labour used within the various types of production, as the effects of changes in production are likely to differ widely by category. For women, particularly, an explicit categorization is useful, because more casual forms of work and unpaid family work are usually ignored.

The simple classification of wage labour versus self-employment used in the 'informal sector' approach is an obvious simplification (cf. MacEwen Scott, 1979: 106-112), which will not be discussed further. Bromley and Gerry (1979: 5-7) have developed an alternative classification which is more explicit concerning the coupling of specific labour relations to a form of production. Their typology is a continuum between formal wage-labour and self-employment, and takes into account a number of intermediary forms of work which are often covered by the blanket term 'casual work' (defined as 'any way of making a living which lacks a moderate degree of security of income and employment'). They state 'these four categories of casual work are, in fact, alternative relations of production, as they affect the individual worker' (Bromley and Gerry, 1979: 5). These four types of 'occupational status' are:

1. Short-term wage work. This is contracted and paid by the day, week month or season, or contracted and paid for fixed terms or tasks, with no assurance of continuity of employment. It is recognized as wage-work in law, but does not carry as such the benefits to the worker which are often associated with formal wage-work. The employer normally provides short-term wage workers with most or all of their equipment, raw materials and other inputs, and workers work on the employer's premises for the specified period of time.
2. Disguised wage work. In this case, a firm regularly and directly appropriates part of a person's work without that person being legally employed by the firm. Examples are outworkers: people who work in their own homes performing specific production functions in return for piece-rate payment, and commission sellers, vendors who receive a set piece-rate for each piece sold. Both types of workers can select their own hours of work, within the limits of their need for a subsistence income, and good relations with the firm. Inputs and credit are often supplied by the firm, as a means of increasing production and tying workers firmly to one entrepreneur.

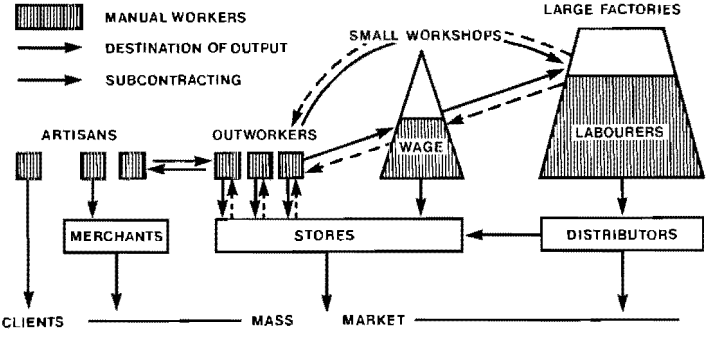
3. Dependent work. Here the worker is dependent on one or more firms for credit, the rental of premises or equipment, a monopolistic supply of raw materials, and an oligopsonistic outlet for his production. There is normally an appropriation process through the payment of rent, the repayment of credit or purchases and sales at prices which are disadvantageous to the dependent party in the relationship.(This implies ties through prices rather than wages.)
4. True self-employment. In this case, a person works independently, obtaining an income without engaging in wage-work, disguised wage-work or dependent work. Outside the domestic subsistence economy, the 'truly self-employed workers' must rely on inputs provided by others, on the receipt of outputs by others, and on a system of payment in goods, services or money. The key to his self-employment is that the producer has a considerable and relatively free choice of suppliers and outlets, and that he is the owner of the means of production. Although dependent on supply and demand for his/her products, and therefore on general economic and social conditions, the producer is not dependent on specific firms for the means to obtain a livelihood. (Bromley and Gerry, 1979: 5-7).

This classification has been criticized for excluding the category of unpaid family labour, in which women and children are most often found (Tom, 1987: 7). The recruitment of women and children is based on age and gender relationships, and is part of the system of home production, mentioned above. Given the fact that the people thus recruited are not paid, and cannot determine the number of hours they will work or the number of days, this type of work can definitely be called 'casual'.

In contrast, work in the formal sector implies a type of wage labour in permanent employment, such as that characteristic of large companies and government bureaucracies, with a) a set number of interrelated jobs which are part of a complex, internally well-organized labour structure, b) work situations which are registered in economic statistics, and c) working conditions which are protected by law (Breman, 1980: 46).

MacEwen Scott (1979: 115) has put these different forms of labour relations and production, and their interrelationships, into a diagram, which shows all the aspects covered above at a glance. I have included it for its clarity; at this point the way women are to be incorporated into the diagram remains to be discovered.

Figure 1.1. Relations of dependence in the manufacturing sector




Source: MacEwen Scott, 1979.

## 1.2.2. Women's access to employment

The consideration of the categories of labour into which workers can be drawn, leads to the question of how workers - particularly women - gain access to various types of employment, and what the mechanisms are by which this occurs.

The idea of a 'reserve army of labour' originally posited by Marx, has been picked up again in recent years by many authors within the socialist-feminist framework (Beechey, 1977 and 1982; Anthias, 1980; Humphries, 1983). It consists of various groups of potential workers, who are presently not participating in production processes in industry. Three groups are distinguished: the floating reserve, the stagnant reserve, and the latent reserve. The floating reserve consists of that section of the labour force in the capitalist industrial sector which is constantly renewed - basically temporarily unemployed workers who are looking for work (Siltanen, 1981: 34). The latent reserve consists of all people working in agriculture thrown out of it because of the capitalization of agriculture. The stagnant reserve is the casually and irregularly employed labour force.

These forms have been discussed within the context of the development of capitalism in the nineteenth and twentieth century in the USA and its impact on women's productive work within the household (e.g. Power, 1983), and recent trends in women's labour force participation (particularly married women) in Europe and North America (e.g. Braverman, 1974; Breugel, 1979; Connelly, 1978; Humphries, 1983). The question is whether it is useful to analyze a Third World situation.

The reserve army of labour concept has been discussed at two levels, which has led to a certain amount of confusion; 'first, it is discussed in relation to the general laws of capital accumulation, which suggests that the reserve army of labour is a precondition and a consequence of the development of wealth on a capitalist basis. Second, it is discussed in the context of its concrete forms' (Siltanen, 1981: 34). Beechey (1977: 56-58) discusses women's position within the 'reserve army of labour' at the first level. She suggests that the specific position of women in the labour force has to do with a) their labour being paid for at a price below its value, b) their labour power having a lower value, related to the existence of a family structure in which women are dependents, and the ideological assumptions concerning this family structure. Anthias criticizes her formulation of the problem, however, as being tautological and suggests that it is necessary to analyze the process by which women are drawn into employment and various categories of employment within a concrete 'social formation' (1980: 53-56). Only when women's employment is considered within a social and political arena, can its importance and the way it is structured be seen for what it is.

Braverman currently sees 'housewives' in the USA as a form of reserve labour, on the assumption that these women would primarily define their roles as such (Braverman, 1974: 391). This assumption may not be made in a Third World context; rather than explaining how this particular group enters industrial labour, more emphasis should be put on possible differences between women on the basis of their age, marital status and position in the household.

My starting point is that, although people obviously vary in terms of acquired education, training and work experience, these factors alone are not enough to explain differences in job allocation between men and women; one must also take mechanisms of labour market segmentation with regard to gender into account (5). Here I will look briefly at what has been said on this concept in industrialized countries, before going on to discuss the situation of (women) workers in Third World countries, and what has been said about segmentation.

It is necessary to look both at the degree to which labour markets are segmented and at the factors operative in such labour market segmentation. Labour markets are defined as 'those institutions which mediate, affect or determine the purchase and sale of labour power' (Edwards, Reich, and Gordon, 1975: xi). Segmentation is said to occur when 'the labour market is divided into separate parts distinguished by different characteristics, behavioural rules, and working conditions' (Edwards, Reich, and Gordon,1975: xi).

Authors working on segmentation in the USA and European countries have concentrated on the division of the labour market into two sectors: the primary market, with well-paying jobs, which are high-status and stable, and the secondary market, with low-paying, low-status and self-terminating jobs. Two types of explanation have been common: the first is that of economic flexibility for employers (e.g. Doeringer, 1980 [1967]: 230-231), and the second linked to various strategies of control over the workforce by employers (Edwards, Reich and Gordon, 1975: 3-26). In my opinion, the two explanations are not mutually exclusive; instead the degree to which a firm needs to be 'economically flexible', i.e. cut costs, and can 'control' its work force is related to its size, its institutional setting, and its control over markets; in short, to the form of production under consideration (6).

Several points concerning women's employment have been made by those using the segmented labour market approach. These improve on earlier explanations of women's position in the labour force by pointing out that discrimination against women workers is the result of 'group' treatment based on the norm by which workers are selected (Blau and Jusenius, 1976: 192-193). Each and every woman is not expected to behave in the same way; however, the onus of proof of behavior outside an assumed pattern lies with the woman worker and not the employer.

Treatment as members of a group does not prevent differentiation among women on the basis of other characteristics, such as age, education and marital status. Occupational assignment by employers (or other workers) has a greater influence on women's potential occupational choices and mobility than do their personal preferences (Blau and Jusenius, 1975: 195). Thirdly, worker 'quality' in terms of turnover and skills is not determined solely by individual characteristics, but also by the 'quality' of the job itself (Blau and Jusenius, 1976: 195-196).

However, the segmented labour market approach is limited in its explanations regarding women; it cannot explain the variation in wages and working conditions within the range of predominantly female jobs. Neither can it explain the differences between men and women in the primary segment of the labour market (Blau and Jusenius, 1976: 197).

The factors mediating access to employment can be clustered into two categories. The first set is related to the interaction of women's employment and their position in the household/family, linked to the class background of the household. I will come back to this in the next section 1.2.4., when I discuss the influence women's household/family backgrounds have on their access to employment, and the impact employment has on her bargaining power in the household. The second category of factors are those related to 'forms of production and class formation' and pertains to the way in which employers, unions, workers and the state all try to influence who gets what type of employment, and to what extent gender plays a role in the struggle between groups.

In a Third World context, segmentation has been widely discussed within the 'informal sector' debate. I will refer here only to literature concerning women workers.

Only a small group of women gain access to formal sector employment. Employers in factory production - particularly export factories - tend to make a stringent selection of women workers on the basis of age, marital status and education. Only young, unmarried women with some education have access to jobs in such factories. This situation has been described for a number of 'newly industrializing countries' (Blake, 1980; Lim, 1978; Baud, 1977; Joekes, 1982), both in Southeast Asia and North Africa. This group of women has access to such jobs only for a short period of time: the years before marriage, after which they are excluded. Pineda-Ofreneo (1982: 284-288) has shown how married women afterwards take up similar work in the informal sector.

The majority of Third World women outside agriculture work in the 'informal sector' (cf. Heyzer, 1981a: 9-10). They tend to be concentrated in employment related to or extending from their household work or traditional productive tasks (washing, cleaning, cooking food, food processing, trading) (Heyzer, 1981a: 5; Nelson, 1979: 296-297). The variety of jobs for women also tends to be less than for men (Nelson, 1979: 296-297). These women often have little or no education or vocational training, and develop their skills while working.

The links between employment in large-scale production and small-scale and artisanal production have not often been documented. Beneria and Roldan traced the existence of subcontracting chains in Mexico City from multinational enterprises to domestic outwork. They found that smaller firms tended to be more 'feminized', and that this was almost complete for domestic outwork. The extent of women's employment tended to increase noticeably at the level where production units changed from legally registered units to semi-legal or illegal units (Beneria and Roldan, 1987: 43). Women were commonly clustered in different jobs than men, and on average received lower wages than men.

After this brief description, I return to the question of what mechanisms of segmentation operate in the context of Third World economies. Some other mechanisms of segmentation have been mentioned: a) channels of access to particular jobs, and b) labour mobility between jobs and sectors (Breman, 1980: 15-21; Holmström, 1984: 181-248).

In discussing channels of access, my emphasis is primarily on the employer-employee channel. Unions as a channel are important only for workers in formal wage labour, and the state mediates primarily via labour legislation, which also pertains to formal wage labour (this

applies to both countries). Given the fact that formal wage labour is such a small part of total employment, it is more reasonable to focus on the relationship most working people experience. I also confine myself to the urban labour market for manufacturing industries.

A dominant aspect in channeling access to work is the persistence of primordial sentiments and linkages on the basis of membership in a social category such as caste, region, ethnic or religious group. Breman suggests that such membership remains important not because of the 'force of tradition', but because of scarcity of employment, which leads to the necessity of using membership as a lever (1980: 17-18). This does not imply a set of sub-markets which are independent of each other, and have no overlap.

It should rather be seen as a process of changing alliances and boundaries between social groups, within the context of an overabundant labour supply, and with a large group of very poor people who are striving for a minimum of security.

Holmström indicates that membership is a necessary but not sufficient condition for finding employment (1984: 199). Generally speaking, the bigger the factory and the safer the job, the more bureaucratic and formal the selection procedures. However, there is simply a gradation between factory and small-scale production. Recommendations from family and friends remain an important channel for job access, due to employers' caste and class prejudices (Holmström, 1984: 218). Although skills and skills acquisition are important, they may also be limited to certain groups of people.

Patronage and brokerage systems influence access to jobs. Patronage may work directly between a patron and a client of different social class, for jobs about which people of high rank have some say (Breman, 1980: 18). Holmström also suggests that in the Bombay labour markets there is discrimination against workers with experience and skills, but without the right social connections to get a job in the factory sector (Holmström, 1984: 194).

Brokers operate as intermediaries between employers and a number of job-seekers for the same type of job. Holmström suggests that patronage is experienced by workers in formal wage labour at skilled blue-collar and white-collar levels. Brokers are important particularly for the 'middle and lower classes', who cannot make direct contacts with patrons giving out jobs and favours, but rely on factory managers or foremen (1984: 201). Other types of brokers include unions, gang jobbers, and neighborhood networks.

Labour mobility is a second important aspect of labour market segmentation. There has been a general assumption that movement of workers between different segments of the labour market is possible and frequent. Small-scale, labour-intensive activities are supposed to act as a buffer zone, and to be carried out by a floating labour force. Workers are assumed to progress to better-paying jobs in more formal settings. Breman (1980: 19) questions these assumptions, and suggests rather that both vertical and horizontal mobility is limited for workers outside formal wage employment.

Holmström supports this latter view. Looking at job mobility from the point of view of the job-seeker, he suggests that the degree of security a job offers is paramount. Formal wage labour (protected by labour legislation and union organization) is seen as a citadel, which many young, male workers in manufacturing attempt to reach (Holmström, 1984: 5-6).

Several studies indicate that women find little formal wage employment in large-scale domestic industries. Joekes (1982: 9) indicates that women in Morocco make up less than 10% of the formal labour force. In India, women are a minority of workers in the major industries (N.C.o.t.S.o.W., 1974: 185-187).

Downward labour mobility is a still stronger process. As pressures on urban labour markets grow, the competition for work becomes greater. Within families, as educational levels demanded for jobs are raised, each generation faces successively higher barriers to access to the same types of jobs their parents held (Breman, 1980: 20).

Very little is known about how gender aspects influences labour mobility. However, one study which demonstrates downward mobility is that of Pineda-Ofreneo (1982) in the Philippines; there women who previously worked in factory production of clothing, after marriage had access only to domestic outwork.

### 1.2.3. Women and the labour process

The issue to be considered here concerns women workers' share in total employment, and how this share changes during industrialization. To date, the main thesis concerning women's share of employment during industrialization has been that women become marginalized. Boserup indicates that women lose their traditional roles during economic development, and are given little access to newly-created industrial employment (1970: 112-114). Her explanation encompasses various factors: supply and demand, the effect of colonial systems, and indigenous social customs.

In more recent literature on Third World development, the idea of marginalization recurs frequently, although not as an explicitly stated framework. Recently, MacEwen Scott has systematically drawn together some of the assuptions on which it is based (MacEwen Scott, 1986: 649-670). 'The central idea, drawn from Marxist and socialist feminist writings in Europe and North America, holds that women's marginalization is a product of capitalist organization of production and use of labour. The basic elements in this are: the separation of production and reproduction, the hierarchical structure of capitalist enterprises, the rise of surplus labour and the industrial reserve army, and the 'mutual accomodation between capitalism and patriarchy' (Hartman, 1976,1979; Beechey, 1979) which results in women's confinement to the home, to inferior jobs, and to the reserve army of labour' (MacEwen Scott, 1986: 651).

In Latin America, the marginalization of women has been included in a debate about the extent of surplus labour produced by dependent capitalism. This is characterized by an inbalance between labour needed by the large-scale capitalist sector and the available labour supply, which is the result of dependence on foreign technology and domestic inequalities. Surplus labour was excluded from the capitalist sector and absorbed in the 'informal sector'. It has been suggested that women's exclusion from productive employment has been greater than in industrialized countries, as has their concentration in 'informal sector' manufacturing and services (MacEwen Scott, 1986: 651-652) (7).

However, a number of studies concerning the new international division of labour, resulting from industrial relocation, have shown that specific groups of women are drawn into the labour force in factories producing for the world market. This situation has led to a focus of attention on the

types of jobs women hold rather than the extent of women's labour (Elson and Pearson, 1981: 144-166; Safa, 1981: 418-433; Arizpe and Aranda, 1981: 453-473). This is an important point: not only should women have access to jobs per se, but the characteristics of those jobs are as important for a valuation of women's employment. Therefore, it seems necessary to spell out the marginalization thesis more clearly in order to be able to use it successfully, preferably at the level of different types of production units.

MacEwen Scott has indicated some ways in which the concept of marginalization has been used. It has been seen as exclusion from productive employment; however, agreement on what constitutes productive employment does not exist. In this study it is seen as ' any occupation by which the person who pursues it receives compensation in kind or money, or in which (s)he assists in the production of marketable goods and services' (Standing, 1978: 26-27).

Secondly, the concept has been seen as concentration in the 'informal sector' as such. This is too vague a category, refers to working women only, not allowing further differentiation among women within each productive sector, for instance by type of labour relation.

Thirdly, this has been seen as substitution by sex, or segregation, i.e. an unbalanced ratio of women to men workers within occupations, sectors or industries. Substitution of individuals can occur directly within the same jobs, such as industrial or occupational substitution resulting from varying rates of growth among industries or occupations. Indirect substitution also occurs; jobs are transformed through changes in products, changes in production technology or geographical relocation of the industry (MacEwen Scott, 1986: 666-667). The issue of substitution is very important, in my opinion, but needs to be divided into several components, related to changes in production technology and the relative growth of different forms of production.

In an attempt to make the idea of marginalization more specific, I digress to the issue of technology and labour utilization, mainly in the context of the industrialized countries. Then I formulate a number of questions concerning changes in women's labour which can be posed at the level of production units.

Thus we return to the discussion in the previous section concerning the different forms of production. Marginalization is looked at in this study from a double perspective: in the context of differential use of women's labour within the different forms of production, and the type of labour relations in which it occurs. To be able to examine the mechanisms by which women's labour changes, the primary level of analysis needs to be that of the workplace, where the influence on women of changes in the labour process can be measured directly. Of course, one must keep in mind that such changes are the result not only of factors emanating from the production unit, but also of external political and ideological factors, which impinge on employers and workers in production units in specific ways (e.g. competition among firms, industrial policies, labour and social welfare policies).

The effects of technology on the use of labour have been studied mainly in the context of the industrialized countries. I will indicate the basic ideas concerning effects on labour in general, before going on to discuss what has been said about women's labour. However, much less has been said about such effects in the Third World context or concerning women as

workers. What does exist is related information from various studies. Therefore, I will go briefly into the basic ideas as formulated in the European and North American context, and then discuss several pointers from the Third World context.

Basically, there are two positions concerning the effects of technology on the use of labour. Nineteenth-century economists considered the application of technology in the labour process to be very positive in terms of efficiency and increase in production and wealth. Babbage stated the advantages for employers in terms of training and earnings of workers: division of labour reduced the time necessary for learning, as only one operation on a machine had to be learned rather than a whole metier (1832: 132), and this enabled employers to recruit cheaper workers, since their skills and capacity needed to be geared only to a small part of the total production process (1832: 137-138). Ure (1835: 20-21) not only saw the reduction of training time needed for one worker as positive, but also believed it enhanced the employer's control of the work process.

Marx also considered the enhancement of the employer's control over labour the central issue in the division of labour and use of machinery. However, he considered it from the worker's point of view, and called it the real subordination of labour to capital, by which 'the labourer becomes a mere appendage to an already existing material condition of production' (Marx, 1867: 364; cited in Schmitz, 1985: 9). This is in contrast to formal subordination of labour, in which labourers work for capital, but the labour process is still under control of the worker. The stages in development to real subordination go from simple cooperation to manufacture to machinofacture.

The implications of this process for the use of labour, skills and wages were seen as follows by Marx: in simple cooperation, large numbers of workers are brought together (either through subcontracting or in one workplace) but tools used and skills are not changed. Rather, control over the amount of work performed by workers is exercised by extending the working day. This does not change the inherent character of the work process, and the limits are obvious in terms of the physical limitations of the workers.

In manufacture, tasks are divided between workers and machines developed for each task. This process began the reduction of skill requirements, but still allowed workers some degree of control over the contents and the intensity of work. In machinofacture, the labour process is organized around the machines: workers are made subservient to machines rather than the other way around. Skills are further reduced, and only three categories of workers remain: workers at the machines, those attending the workers, and the engineers, mechanics, etc. who regulate and maintain all of the machinery (Marx, 1867: 396, cited in Schmitz, 1985: 10). The inferences Marx draws concerning workers are twofold; first, the use of machinery makes it possible to recruit a wider range of workers and thereby depress wages; secondly, technical change leads to displacement of workers, relegating them to the reserve army of labour and again holding down wages.

After the nineteenth century, the role of technology and labour utilization was largely ignored by economists. However, a number of management studies, industrial sociologists, and recent Marxist thinkers and socialist-feminists have returned to this issue. Scientific management was introduced by F.W. Taylor (1903, 1911), whose main concern was reorganizing work (at all technological levels) to a higher degree of efficiency by dividing work between management and workers on the principle

of heads and hands. Workers should perform tasks which have been pre-determined and organized by management on the basis of scientific analysis of the production process. These ideas were embodied in the new method developed by Henry Ford for factory production: the moving assembly line. It thus sets the speed of work, and 'takes the work to the men instead of the men to the work' (Schmitz, 1985: 13). Its implications for skills are clear: a single operation can be learned in only a few days. The level of wages is not clearly linked to these changes in the production process but seems more related to e.g. union strength.

In recent management and industrial sociology studies, automation and computer technology are seen as solving some of the problems of routine work, and as creating a labour process in which the relative autonomy of workers once again increases at higher levels of skill (Davis and Taylor, 1972; Blauner, 1964: 182).

Recent Marxist thought rejects this idea, and sees a continuing process of degradation of work, with increased concentration of know-how in management. Braverman re-started the debate on the labour process, with his now classic work Labour and Monopoly Capital (1974). He suggests that automation does not raise the average level of skills, but again leads to polarization between workers, whose jobs are deskilled, on the one hand, and management and engineers on the other hand. Even among those concerned with 'conception' there is a certain polarization between management and engineers, who control the science and technology, and the white-collar workers who assist in the process.

The preceding discussion is only a very brief review of the main ideas concerning the role of technology in influencing skills and wages in industrialized countries, and does not reflect the variety of material available on this subject. However, two points relevant to this study emerge from other, more empirical work.

The first is that variations among industries and types of labour process are not much incorporated into theories concerning long-term changes. Variations are the outcome of uneven technological progress; mechanization and automation have not occurred everywhere. This is often related to problems in finding technical solutions. But even when a solution exists, actual application depends on the degree of competition with other producers, or on labour conflicts (Schmitz, 1985: 18; Buroway, 1978: 237-242).

In addition, in industries not based on craft work the implications of changes in control lie not so much in the deskilling of work, but in casualization and a decrease in job security (Littler, 1982: 122-145) (8). In addition, the implications of deskilling vary among industries. For non-craft workers, the nature of the employment relationship was found to be more important than the division of labour. The threat of casualization of work and lack of job security weighed more heavily than work content (1982: 129). This suggests that industries and work forces cannot be considered homogenous, but need to be differentiated.

A second point is that the role of trade unions and workers in resistance to increased control over the work situation has been neglected (Rubery, 1980[1978]: 258-261). Resistance can include attempts to control labour entry into occupations or industries, or differentiation among groups of workers to minimize interchangeability.

In a Third World context, the issue of technology and labour utilization has been little examined, neither for employment generally nor for women's employment specifically. Rather, studies have focused on 'choice of technology' and the 'transfer of technology', and on differences in labour markets related to large- and small-scale production (see previous sections) (9). The facet of these studies which are relevant for the current discussion are the assumptions made concerning the use of technology and employment effects within different types of firms.

Generally, the following correlation is assumed concerning technology and firm structure: capital-intensive mechanized technology is used in large-scale industry, and labour-intensive, traditional technology is used in small-scale and artisanal industry. However, this simple picture is increasingly being refined.

Results from the ILO Multinational Enterprises Programme on the extent to which technologies used by MNE's contribute to employment creation, and which factors influence the choice of technology used, has demonstrated that within the large-scale capitalist sector there are variations in the use of technology, and that choice of technology depends mainly on: 1) economic constraints facing the firm (particularly the size of the local market), 2) technical specifications and quality standards set by the parent company, and 3) the firm's internal innovative drive. Third World MNE's are generally more labour-intensive than those from industrialized countries, due to their smaller markets and more limited scale of operations (ILO, 1984: 27-28).

In small-scale production little is known about the actual use of technology. Small producers have little access to new types of production technology because it is controlled by foreign companies or because the initial investment required is too high (Schmitz, 1982: 29). However, small-scale units working as subcontractors for large-scale firms and those working independently show significant differences: the former use technology 'neither as primitive and ...manual as in the other segment of the small-scale sector; but it is linked with the modern technology used by the large units' (Papola, 1981: 255 ff.).

An exception to the lack of studies on Third World labour processes is that of Schmitz (1985). On the basis of case studies in the textile, chemical fibres and hammock industries, he shows that the relative importance of deskilling, control, wage levels and labour mobility is different in a Third World context. Although he discusses subcontracting and its 'external labour force', he concentrates on workers within a firm. He indicates that deskilling does occur, but that in relative terms the skilled component of the labour force increases (Schmitz, 1985: 171).

He also looks at technology as strategy of control for the labour force and shows in his case studies that forestalling workers' resistance is more important than re-establishing workplace control (Schmitz, 1985: 176). Despite the greater overall repression experienced by workers, and the relative weakness of the trade unions in Third World countries, repression does not guarantee daily worker compliance.

Finally, results from his case studies show that both low wages and high turnover (textiles) as well as high-paying stable employment occur (chemical industry) in capital-intensive industries. The reason behind the difference lies in employers' concern with the reliability of workers' production. In a continuous production process much greater reliability is required than in a fragmented production process (collective reliability rather than individual worker reliability). In addition, labour costs in the former are usually a smaller proportion of total production costs than in the latter (Schmitz, 1985: 178-183).

Gender aspects in the workplace

Transposing these remarks to the question of technology and the utilisation of women's labour, a more precise series of questions can be formulated concerning the extent of marginalization of women. The main focus is now at the level of the production unit, rather than on a general marginalization thesis.

The first question is what substitution effects occur between men and women. In industrialized countries, various patterns have been noted. In the printing industry, women are replacing men in certain jobs as part of management strategy to decrease labour costs and opportunities for workers to organize (Cockburn, 1983). Such feminization of jobs is often followed by lower levels of payment and deskilling of the work.

In Third World countries, the opposite trend has been evident in the few national large-scale industries where women find work. Men replaced women in the Indian textile industry in the thirties as unions bargained with management concerning streamlining of production. In Ahmedabad an explicit agreement was made by the union to substitute men for women (Chacchi, 1982: 4-6). Such substitution is linked to changes in functions in the production process; generally, when tasks become more mechanized men replace women workers (Dauber and Cain, 1981: 41).

Substitution effects in small-scale industry or artisanal production have been indirectly documented. Newly introduced technology has generally wiped out women's functions; the resulting work is carried out by men. This has been documented in the Indian handloom industry, where introduction of new technology in pre-weaving processes led to women's exclusion (Patel, 1984: 4).

A second question is whether changes in skills (both de-skilling and increased skill requirements) affect men and women in the same manner. The concept of skill used here refers to both 'objective competencies' (i.e. the possession of particular techniques) and 'social convention' (i.e. the successful definition of work as skilled by either workers' organizations or employers) (Beechey, 1982: 63-64). This suggests that it is important to look both at the actual work content of a job, and at the way shop floor and trade union organizations help to define jobs.

As Schmitz has already indicated, acquisition of new skills may well be a more important question than deskilling. In industrialized countries, this issue has recently become more relevant in the context of increasing automation (see Huws, 1984; Henwood, 1984). Women carry out unskilled work, and have little access to new functions requiring more skills, as employers feel that extra training time is wasted on women.

In Third World countries, the trend is more frequently that mechanization leads to acquisition of new skills by men and loss of employment for women. In large-scale industry, mechanization has led to a greater demand for highly-skilled labour. Women lose their jobs, and have little access to the new jobs. For India, this process is reported in a number of case studies of quite different industries. Kalpagam (1984) reports this process in food-processing, textile/clothing, and beedi industries (10).

Skill requirements can also become a barrier to women's access to better-paid jobs in large-scale industry. In Singapore the first phase of industrialization was based on light export-oriented production, in which many women were involved. The second phase of heavy export-oriented industrialization, requiring highly skilled labour, increasingly marginalized women's labour (Safa, 1981: 431).

What has been said about deskilling in small-scale manufacturing and home production? There are other indications that women lose their jobs rather than retaining jobs requiring less skills. In India, this trend has been documented in traditional handicraft and handloom industries, and in the coir industry (Patel, 1984: 3-4).

Acquiring a new skill is also more difficult for women in this form of production. Women's skills in production are often derived from their domestic tasks. A study by Nelson (1979: 296-297) in Nairobi suggests that women are more limited in their range of productive activities than men, with less access to alternative ways of acquiring new skills. The apprenticeship system which is widely prevalent in small-scale production as method of training and access to future employment is often closed to women; boys and men are considered to be future permanent workers whereas women are not (Bromley and Gerry, 1979: 236-237).

The question of social definition also affects the classification of level of skills. Elson and Pearson indicate in a study of Southeast Asian factories producing for the world market how the 'nimble fingers' assumed to be inborn in women are in fact the result of training within the home. However, because such training is not recognized by employers, women's jobs are considered to be unskilled, whereas men's repair work is considered skilled (1981: 148-150).

The question of whether deskilling occurs in the process of subcontracting has not yet systematically examined by type of firm. In this case, deskilling is not an issue for the group of workers within a firm, but for the group of workers involved in the total production process, whether inside or outside the firm (what Schmitz terms the external labour force, and Bromley and Gerry 'disguised wage work'). Such deskilling could occur when work is transferred to women working at home, using domestic technology rather than industrial machines. This process could be fairly extensive for women workers, as they are more vulnerable to having domestic outwork forced on them.

A third question is that of control over the work force within the production unit. For women workers such control is predicated not only on their situation as workers, but also incorporates patriarchal aspects. In the export industry in Southeast Asia, management uses patriarchal arguments to control women workers. Such strategies include accentuation of the idea of labour and management as 'one big family', restrictions on workers' movements outside working hours, and enlisting the family of the worker to monitor her social activities (Elson and Pearson, 1981: 152-153, 161). In Indonesia, similar trends are seen in factories in West Java, where young unmarried girls are recruited. There politically important men from the village act as patriarchal mediators between management and the women workers (Mather, 1983: 168-170).

Within large-scale national industry, control over women workers has been based on direct strategies of management toward all workers as well as on strategies which differentiate among workers, using among other factors gender. Chacchi (1982: 4-6) indicates that when redundancies became inevitable in the Ahmedabad textile industry, women workers were the particular category laid off because 'they had husbands working in the industry who could provide for them'. A more patriarchal form of control is mentioned in the Indian mining industry where whole families are

recruited to work under a contract made with the male head of the family. Thus, the wages for women and children are subsumed under the one wage paid out (Ghosh, 1984: 6-7).

This last strategy indicates a major form of control often used to constrain women - namely, subcontracting to small-scale production units and domestic outworkers (11). Control is exercised by having a long chain of geographically decentralized subcontracting units and middlemen. The indirect employer-employee relations make it difficult for workers to organize themselves. This applies to both men and women working in forms of 'casual work'. However, the more 'casual' the production unit, the greater the extent of women's employment (Beneria and Roldan, 1987: 42-44).

For women workers, further difficulties are presented by the specific context in which their labour is recruited. When work is contracted by middle(wo)men at the neighborhood level who control the channels for selling the products made, existing social networks make it difficult to make demands. Women can also be recruited as unpaid family worker on the basis of family relationships as a form of patriarchal control (Tom, 1987: 7).

A fourth question is the extent and type of organization found among women. In the south-east Asian export factories, one form of resistance in the work place is the "mass hysteria" sometimes seen among women workers. Although this does not seem to be effective in the long run, it can serve as a safety valve. Another form used by women workers, is wildcat strikes, which are often not supported by male workers and unions (Elson and Pearson, 1981: 153), so that they are mostly ineffective.

In small-scale production, home production and domestic outwork, one expects forms of resistance to depend on whether women are recruited as a form of wage labour or as unpaid family labour. Forms of resistance used by unpaid family labourers have been little studied. The same applies to women wage workers in small-scale production. Slightly more is known about women working as domestic outworkers and as dependent producers.

Organizations working with these women emphasize the necessity of taking problems in both their productive work and family responsibilities into account. Domestic outworkers do not directly resist the firm subcontracting work, but rather resist the intermediaries with whom they come into direct contact. This is very difficult, as success depends primarily on the extent to which women producers can form a united front. Child care, vocational training, and credit facilities are the infrastructure women workers need to improve their economic situation (Jamani, 1987: 262; Everett and Savara, 1987: 226). Experiences in India show that it is possible to organize women working in 'casual work' relationships, but that financial and political support from influential people may be a necessary factor in the initial stage of organization (Jain, 1980, on SEWA; Chambers, 1985, on WWF).

A fifth question is that of differences in wage levels and labour turnover. In export industry high labour turnover has been characteristic of women workers (Baud, 1977: 24; ILO, 1985: 67). This has been related to fluctuations in production experienced by such industries, and attempts by management to reduce labour costs in periods of production cutbacks. In a situation in which production functions are highly fragmented and require little training, such a strategy is feasible. In addition, this has been related to attempts by management to avoid costs

of social legislation concerning women workers particularly - maternity leave and child care facilities. Changes in wage levels are linked to the way in which they are calculated; whereas men may receive monthly payments, women may receive piece-rate payments. When speed of production is increased by technological change, such piece rates may fall or production quotas be raised (Baud, 1977: 48-49).

In domestic large-scale industry, changes in women's wage levels and turnover have been little studied. In one case study, Acero (1984: 71-73) indicates that introduction of new machinery in the Brazilian textile industry has displaced relatively more women than men. In addition, the functions that remain for women are less well remunerated, and offer less job security. In small-scale and home production, specific gender differences are less well documented. A few case studies focusing on women's labour in small-scale industry have emphasized differences between men and women in wage levels, job security and skills. In a study on the Madras garment industry, Kalpagam indicates that in small-scale production
units, there are striking differences in wage levels of men and women, and among functions, although she warns that account must be taken of differences in working hours, intensity of work and productivity (Kalpagam, 1981: 1960).

Finally, subcontracting of production originally carried out in the factory leads to lower wage levels and higher labour turnover. One of the clearest examples of this is the study by Pineda-Ofreneo (1982: 284-288) which shows that for domestic outwork, wage levels are several times lower than for factory work, payments are in piece rates and irregular, and the amount of work available fluctuates.

## Toward a more specific approach

On the basis of this more detailed discussion of the marginalization thesis, the following points can be elicited.

First, the relative importance of various changes in the labour process in the developing countries differs from that in industrialized countries. Because of the larger labour surplus and the low level of incomes, the issues of total employment, wage levels and labour turnover are as important as control and deskilling. Control may serve to forestall organization of workers rather than occurring as a reaction to organizing. In the context of imported production techniques, deskilling is less important than acquiring new skills.

Secondly, the idea of women as a reserve army of labour has received more attention than propositions about changes in the situation of working women. Five issues which should be given more importance, are: 1) substitution of men by women workers and vice versa, 2) deskilling/reskilling of functions, accompanied by relegation of women to less skilled functions, 3) forms of control and organization of workers, 4) wage level differences between men and women, and 5) labour turnover.

Third, research has concentrated on large-scale (export) industry with a labour process in which women workers are subordinated to the machines. Very little information is available on the effects of technological change on women's work in other types of production, particularly small-scale production and artisanal production.

Fourth, the manner in which subcontracting from large firms to small-scale production units and home producers is affecting women's labour needs to be examined for its effects on the aspects mentioned

here. This holds generally for all those working in such situations, but is a fortiori important for women, because the majority of women work outside large-scale production units.

### 1.2.4. Women's labour, the household, and autonomy

In this section, I shall be discussing the connections between women's industrial labour, the family-based household and women's autonomy. These connections will be examined in two distinct ways. First, the family-based household is a major factor in the process of growing up, influencing the life choices women make in terms of education, work and marriage partners. These determine a first line of limitations of choices of work. Secondly, by participating in economic activities, women gain some access to material resources, which would enable them to renegotiate existing degrees of social autonomy within the family-based household. The degree to which they can do so is related to the characteristics of the household, to the characteristics of the work they perform, and more generally, to existing cultural norms and values. In the following paragraphs, the discussion is limited to family-based households with working-class backgrounds (12).

By the family-based household, I mean the unit within which reproduction is organized, and in which the 'relations between members are often thought of in terms of kin relations' (Harris, 1981: 51-52). The household can be seen as a set of exchange relationships, pertinent to a) the division of productive work and domestic labour - i.e. the servicing of immediate physical needs - among its members, b) bringing in income, exchanges, and consumption between family members, and c) decision-making patterns, based on access to resources and existing authority (related to religion and the state) (13) which indicate each person's relative autonomy.

A primary distinction which has been made recently, is between male- and female-headed households (Buvinic et al., 1983: 216-271). The number of female-headed households all over the Third World, including countries where it was previously very rare, is increasing. Chant has examined differences in the way the two types of households function in Mexico. She shows that the division of labour between family members is different, and the children take over a measure of responsibility for both productive and domestic labour (1985: 640-643).

Variations in the distribution of productive and domestic labour between men, women and children in the working-class family need to be seen in relation to its developmental cycle. Gonzalez de la Rocha (1984) separates the family life cycle into phases of expansion, consolidation, and dispersion, which have very different implications for the division of women's time between productive and domestic labour. In the expansion phase, the household is unbalanced - many mouths to feed and only a few to work, so that women carry the full load of the double burden. In the consolidation phase, children start to contribute income, and mothers often diminish their productive work relative to their domestic labour. In the dispersion phase, economically active children leave their more aged parents. Finally, lower income may prompt aging parents to join other households.

A distinction between women by generation should also be made within each household. Young, unmarried girls who have finished what education is allowed them are often considered to be a category with a relatively low responsibility for domestic labour (although they may give substantial help in carrying it out), and therefore, free to take up longer term, more intensive types of productive work. This is well illustrated by their extensive employment in export-oriented factories (Baud, 1977: 67; Elson and Pearson, 1981: 148-149).

Differences in time allocations of men and women are increasingly being documented, particularly among rural families involved in agricultural production (White, 1984: 23-24; Safilios-Rothschild, 1980: 324). Women have a much heavier burden in domestic labour than men, despite the fact that they also contribute substantially to productive labour carried out by the household.

Variations in pooling of income have been documented in Great Britain (and similar patterns were found in Mexico City by Beneria and Roldan). Among poor working-class families, where the woman has no income, the man may give his total wages to his wife, and receive 'pocket money' in exchange. A second system is one in which the wife is given a housekeeping allowance, and the man keeps the rest of his wages to do with as he likes. In this case, women have great difficulty in coping with price increases, and have to create 'savings' out of a fixed amount of money. A third system is pooling of income from both spouses (Barrett and MacIntosh, 1982: 66-68). In addition, there may be contributions from children.

Allocation of consumption within the household first influences women as children, in their family of origin. Differential access to food, health care and education, as well as expectations regarding their labour contribution influence women's choices in later life. In households where scarcity is usual and survival the goal, the sex/gender system plays a relatively more important role than in families with higher income levels (Safilios-Rothschild, 1980: 334). A study of 17 villages in Punjab showed that boys were better fed than girls in all castes; however, the differences in nutritional levels were much larger in lower castes. The smallest children (up to three years) are the group with the greatest nutritional problems, with girls more affected than boys. They are closely followed by lactating mothers and then pregnant women (Safilios-Rothschild, 1980: 330).

Health care, often associated with malnutrition, is also used differentially within households. Children are given more health care than adults; male children receive more than girls despite evidence that e.g. malnutrition among girls is more severe. This is reflected even more strongly in child mortality rates, where striking differences exist between girls and boys. In rural Punjab, the mortality rate for girls is almost 150 per cent higher than for boys (Safilios-Rothschild, 1980: 330-334).

Education may have less priority for poor families than the labour and income children can bring to the household. The payoffs from education may be considered too uncertain to invest in, and too long-term to contemplate. However, sons and daughter have different long-term utilities for the parents; sons are considered to have a long-term responsibility for their parents, while daughters are lost to the family on marriage (this does not apply to matrilineal societies, and may not apply to generations of 'female-headed households'). When choices have to

be made, girls often receive less education. These views can change; in India, a women's education may become an asset in addition to or substituting for dowry.

Allocation of consumption between adult men and women also differs. Adult women experience a high maternal mortality rate, as a result of malnourishment, frequent pregnancies and lactation. Increases in women's income in rural Kerala have been asociated with improved nutritional status for children, whereas the aggregate household income had much less predictive value (Kumar, 1977: cited in Safilios-Rothschild, 1980: 327-328). This suggests that women spend a more of their money on food than men.

The autonomy of men and women within the household, based on decision-making patterns, is related to two sets of factors. It occurs within existing patterns of gender and age-based authority, i.e. within the normative context within which the manoeuvring for autonomy occurs (Baud, 1983: 104-112; Beneria and Roldan, 1987: 150). The degree of autonomy is influenced by employment and income, the quality of behaviour of the spouse, and women's contribution to the household income and assessment of the domestic situation (Beneria and Roldan, 1987: 137-138). In conclusion, it should be noted that discussions of autonomy assume that distribution of goods and services between household members is not on an equal basis (Whitehead, 1981: 92).

Footnotes to Chapter 1.

(1) Medium-size enterprises are subsumed under the heading of large enterprises when they are registered in the 'formal sector', and under small-scale enterprises when they are not.

(2) A form of production is ideal-typically based on the type of relationship between the owner and workers, and the type of production process carried out (Harriss, 1982: 947).

(3) For a complete discussion of this approach and its development and policy implications, see Moser (1978: 1042-1055).

(4) See the Special Issue of World Development, edited by R. Bromley (1978: 1031-1198) for an important overview of authors who address themselves to the issue of an alternative approach to relations among different forms of production.

(5) Unfortunately, information on systematic differences between men and women in occupations come from the USA rather than developing countries. There, the evidence indicates that even when differences in worker characteristics are taken into account, women are paid lower wages for the same job, are crowded into a smaller range of occupations, and are segregated into industries with lower rates of profit and less market power (Stevenson, 1975: 249-50).

(6) Edwards, Reich and Gordon (1975: xi-xxi) relate segmentation of the labour market to the historical period in the USA when firms changed from predominantly 'entrepreneurial family firms' to a corporate structure, accompanied by concentration in the product market. Such firms co-existed with the surviving competitive family firms. The dualistic structure stopped homogenization of labour markets and work experiences, and created divisions among people of the working class.

(7) Differences certainly exist between industrialized and developing countries; in the latter only a minority of people actually attain full employment and a family wage, so that women's economic contribution has always remained crucial for family maintenance.

(8) Littler classifies industries with indirect employment and control as those with a domestic background, industries founded on a craft basis and gang-work industries (1982: 124-128).

(9) Currently, this focus is changing to include aspects of technological change from a management perspective (see Fransman, 1986, for a review).

(10) This process has been documented fairly extensively for women working in agriculture (see Ahmed, 1985, for a collection of articles on the effects in this sector).

(11) As the previous paragraph shows, this can also occur in situations where the recruited labour force remains within the factory work place.

(12) I am talking here about families in different segments of the working class: wage labourers in large-scale production, and both producers and labourers in small-scale production and artisanal production.

(13) The term 'household' is used in this study as short-hand for family-based household. Productive work is defined as 'any occupation by which the person who pursues it receives compensation in kind or money, or in which (s)he assists in the production of marketable goods and services (Standing, 1978: 26-27). The aspects concerning the household were compiled from the articles by Harris (1981: 49-68) and Whitehead (1981: 88-111), in which these and other aspects are discussed.

## CHAPTER 2. RESEARCH APPROACH AND METHODOLOGY

In this chapter the research approach and methodological aspects of the case studies are discussed. First, the concepts used and their operationalisation in this study are indicated, and the propositions related to them are given. Secondly, the selection of countries, sectors, production units and women workers are discussed. Thirdly, the advantages and constraints of the data bases and data collection methods are presented.

### 2.1. Concepts and propositions

#### 2.1.1. Categories of labour and production units

Before beginning to discuss the way women are employed in industry - the actual focus of this study - a few words need to be said about the categories of productive labour and the types of production unit which can be distinguished in most Third World countries.

In this study, six categories of productive labour are distinguished: formal wage labour, short-term wage labour, disguised wage work, dependent work, true self-employment, and unpaid family labour. The operational definitions are given in Chapter 1., section 1.2.1.

Three main types of production unit are distinguished; large-scale production units, small-scale enterprises, and artisanal production (MacEwen Scott, 1979: 115). Of course, further variations within each category can be made but here three categories are sufficient for my purposes. The operationalization of the definition regarding various types of production units is based on the degree to which ownership and production have been separated. Large-scale production units evince a complete separation between capital and labour, and labour is recruited via the wage nexus. In the small-scale enterprise, the owner is most often also a producer (Harriss, 1982: 947). However, there are small-scale enterprises which have made the leap to a full capitalist relationship. Artisanal production is characterized by a complete synthesis of owner and producer (1).

Each type of production unit is characterized primarily by one type of labour process, defined as the combination of material instruments of production (production techniques) and the social organization of labour (Schmitz, 1985: 33). This concept is operationalized in section 2.1.2., where the question of changes in production technology and their impact on women's labour is considered.

In this section, the characteristics of each type of production unit are considered. For each type of production unit, internal factors and forward and backward linkages are traced. The nature and the extent of relationships between the different types of units is considered from the perspective of the degree of dependency: the distinction between production as well as commercial links is made.

2.1.2. Women's access to employment

The literature discussed in Chapter 1 has shown that differences in women's employment in large, small-scale and artisanal forms of production has not been systematically examined in the context of Third World industrialization. Rather, the concept of the segmented labour market has been used to explain gender differences in access to employment. I will again briefly return to this concept, and indicate the way it is operationalized in this study.

Women have been seen as a reserve army of labour to be drawn into or thrown out of employment at will. Three segments have been distinguished; the floating reserve, the stagnant reserve, and the latent reserve. The floating reserve consists of that section of the labour force in capitalist production which is constantly renewed - i.e. workers who are temporarily unemployed. The latent reserve consists of people thrown out of agriculture, augmenting the labour supply for work in industry and services. Braverman (1974: 391) has stated that for women this cateogry also includes housewives. However, for the majority of the population in Third World countries, being a housewife without economic activities is an illusion, so that this 'source' of reserve army of labour is not relevant to this study. The stagnant reserve are the casually and irregularly employed; all those outside large-scale capitalist production. This part of the labour force, insofar as it concerns women working in small-scale and artisanal produciton, is included in this study.

From a gender perspective, women have been seen as a 'cheap labour reserve', as a result of their actual and ideological roles within the family-based household. This puts all women into one category, and ignores differences in women's roles within the household - among mother, daughter, and mother-in-law - and changes during the life cycle of the family-based household.

Rather than defining beforehand the way women fit into the labour force, it is more useful in my opinion to consider the institutions influencing women's access to particular types of employment - i.e. the focus on the degree of segmentation of the labour market. These factors relate both to women's ideas concerning possible combinations of work and family, and to employers' ideas concerning both women workers' relative position to male workers and in relation to their presumed family responsibilities.

In this study the way in which women are drawn into employment is approached as follows. Several aspects from within the family-based household structure which influence women's access to employment are taken into account, and a number of factors relating to 'production forms and class formation', which pertain to the way employers and workers (or groups of workers) try to influence access to employment.

To begin with, women's relation to other family members is considered. Differences in the extent to which daughters and mothers participate in various types of employment are here related to the extent of their household responsibilities. The proposition is that mothers will be more apt to participate in small-scale and artisanal production, and unmarried daughters in large-scale production.

A second aspect is the level of education which the women have completed and the extent to which this determines the range of jobs to which they in principle would have access. The proposition is simply that higher levels of education will give access to a wider range of jobs.

A third aspect concerning married women is the number and age of their children, as a proxy for the extent of their household responsibilities. The proposition is that when women have small children - under the age of four - they will have access only to work in small-scale or artisanal production, as they can regulate their working hours more flexibly in combination with their household responsibilities in such production units.

Finally, the extent to which membership in a particular community (be it caste or ethnic) influences women's access to different types of employment is considered, where relevant, in the case studies. The proposition is that the existence of such community-related stratification of occupations will limit women's access to employment, particularly in large-scale production.

Three factors related to forms of production and class formation are explored. The first factor concerns the extent to which women workers have channels of access to particular jobs in comparison to men workers. The proposition is that it will be the most difficult to gain access to jobs in large-scale production for both men and women, and that women will have other channels of access than men.

The second factor is the degree to which women are recruited as cheap labour when they find jobs. The proposition is that there is systematic differentiation between men and women workers in wages and fringe benefits.

The third factor is the degree of mobility women have among jobs and forms of production units. The proposition is that both women's upward mobility (in the direction of employment in large-scale production) is quite limited. Downward mobility may be larger, as also their horizontal mobility.

### 2.1.3. Women in the labour process

The second question addressed in this study concerns the impact of different types of labour processes on women's share of employment, and how changes in production technology affect the use of women's labour.

The labour process is precisely defined as the combining of the material instruments of production (production techniques) and the social organisation of labour (Schmitz, 1985: 33). Each of the different forms of production are characterized primarily by one type of labour process. In large-scale production (whether for export or domestic purposes) workers are subordinated to the machinery in use. In small-scale production, the labour process is one in which tasks are divided and special tools have been developed for each. In artisanal production, workers are grouped together without changing the existing technology. This scheme is one suggested by Schmitz (1985: 33); whether it is useful in the present instance remains to be seen from the results of the case studies.

In this study the different types of labour process are taken as given factors at any particular point in time. Nevertheless, I am aware of the fact that production techniques are not an independent factor, but are shaped by the social relations of production. Such changes in production techniques and their impact on women's labour will be traced in the context of the mutual influence among different forms of production.

Changes in production techniques must be traced over time, and therefore present many more methodological and research-organizational problems. This difficulty is greater regarding small-scale and artisanal production, where less information is available over time, than for large-scale production. Where possible, the effects of changes in production techniques within each type of production unit are examined. One limitation is that only technological changes in the production process are considered (2).

Changes in production technology have consequences for the characteristics of the work carried out within each type of firm. They also have an impact on the shifting of work among different types of production units, i.e. the extent of subcontracting. This is a question which particularly concerns women workers. Therefore, two questions concerning changes in technology are put: a) what consequences does change in technology have within one type of production unit, and b) to what extent does it lead to shifts in the use of labour between different types of production units?

The marginalization thesis has been the primary device used to explain changes in women's employment during industrialization. As noted, MacEwen Scott criticized the multiple ways in which the marginalization thesis has been used until now. She has made explicit several dimensions which the concept encompasses. These include: a) exclusion from productive employment in any form, b) increasing concentration of employment in the 'informal sector' in manufacturing and services, and c) segregation, i.e. the ratio of women workers to men workers within occupations, sectors or industries.

In this study, I want to look primarily at changes in women's employment at the level of the workplace, in order to be able to indicate directly what mechanisms are operative within the production unit when there are changes. I also want to look at the extent to which women's productive work is 'casualized', i.e. moves from large-scale production units to small-scale and artisanal production. The second and third aspects of the marginalization thesis as outlined above are therefore included in this study.

The impact of different labour processes on women's productive work is looked at comparatively within the three different types of production units - a current cross-section. It is also looked at over time - a dynamic perspective. The discussion includes the following aspects.

The first aspect is the division of functions within a production unit between men and women. The proposition is that the division of functions among men and women is such that women are crowded into unskilled and low-paying functions in comparison with men, and that this is more so in large-scale production than in small-scale and artisanal production. Over time, the proposition is that women become increasingly segregated by function (i.e. the % of women per function) and marginalized by having their access to functions in large-scale production restricted to unskilled, less paid functions. This process occurs in large-scale production, and less so in small-scale and artisanal work.

The second aspect concerns women's skills. Differences in levels of actual or acknowledged skills between men and women within the production unit are considered. The proposition is that women's skills are little acknowledged by employers, so that their work is considered unskilled,

even when it is essential in the production process. Over time, the proposition is that women have little access to more skills and therefore to more varied and better-paying functions in comparison to men. In addition, men workers are substituted for women workers when the technology used bceomes more mechanized.

The third aspect concerns women's workloads and wages within production units. The proposition is that women's workloads are just as heavy as those of men, but that they are paid lower wage rates; this applies to all types of production units.

The fourth aspect is the degree of job mobility which exists for women workers, both horizontally among production units with the same type of labour process, and vertically, among different types of production units. The proposition is that horizontal mobility in small-scale and artisanal production is larger than in large-scale production; and that over time, women workers experience downward mobility in the direction of small-scale and artisanal production - i.e. casualization.

The fifth aspect is the extent of mobilization of women workers. The extent to which trade unions exist, as well as women's membership and participation in them is traced. Here, the extent to which issues concerning gender are considered by women workers, men workers and union leaders are investigated. The proposition is that women and men workers do not have the same issues around which to organize, and that differences in their work may generate conflicts of interest between them.

### 2.1.4. Women within the household

The third question concerns the relationship between different types of productive work women do and their position within the household. This is considered in two ways.

First, women's personal and household characteristics structure their employment opportunities. Aspects considered here are: variations in household composition, the division of productive and domestic labour between family members, and pooling and consumption of income. The basic assumption is that these factors influence their access to different types of production units.

Secondly, women gain a certain amount of social autonomy (bargaining power) from their productive work and income. Social autonomy can be defined as the power and authority over oneself and others, based on increased access to material resources. This consists of the possiblity 'to act effectively on persons or things, which are not of right allocated to the individual or their roles' (Sanday, 1974: 190), and the right to do so.

This bargaining power is reflected in patterns of decision-making within the household. I chose to operationalize these patterns only in terms of explicit decision-making within the family in order to determine the extent of women's bargaining power. I realize that the indirect influence of other household members may be as important in decision-making and in keeping certain decisions off the agenda; however, this limitation was dictated by practical necessity (see also White, 1984: 29). Even when limited to direct decision-making patterns, the process of eliciting the information needed requires extensive interpretation on the part of the researcher (see also White, 1984: 27-28 for similar experiences).

Important family decisions are discussed at length by those involved, so that the decision-making process can be traced fairly clearly. Therefore, a profile of major decisions was constructed, in which 'major' was defined by the expectation that more than one person would participate in making the decision, so that the relative influence of the spouses could be determined. The thirteen decisions selected pertained to major life choices involving both domestic and public activities, such as schooling, jobs, union membership, marriage, control of income, family planning and the children's dowries. The thirteen decisions were scored according to the degree of control exercised by the woman herself.

A factor cluster analysis of the decision profile based on matrices of the association coefficient gamma (3) yielded two clusters of decisions: one of decisions in which some women did not score, and one of decisions in which all women scored. The latter cluster (containing seven out of thirteen decisions) was used for further analysis (for the clusters, see Appendix B.1.). The decisions grouped together in the cluster which was not used for later analysis consisted of those taken by older women concerning their children. The exclusion of these data did not affect the conclusions drawn: in the analysis using the remaining cluster of variables, these women were found to have greater autonomy than others, tying in with their married status. For this group, using both clusters, would only have strengthened the relationship.

## 2.2. Choices and limitations of the study

I have made several major choices in collecting material pertinent to the stated research questions.

The first concerns the group of countries to which the questions will be applied, the second the industrial branches to which the questions apply, and the third the groups of women to which the questions apply.

Although the term 'Third World' has been used as a sort of catch-all to refer to the poorer countries of this world, a number of categories are usually distinguished among Third World countries. The extent of industrial growth and technological change in industry is most relevant for the group of 'newly industrializing countries', in which industrial production contributes substantially to the national product, absorbs a relatively large share of employment, and which play an increasing role in world trade. The concept is used elastically; sometimes covering six or eight countries, sometimes nearly twenty. In this study, only eight countries come under consideration; the 'Gang of Four' in Asia, India in South Asia, and Brazil, Mexico and Argentina in South America (Turner and McMullen, 1984: 6) (4). This group of countries accounted for over 75% of manufactured exports from developing countries in the seventies (Turner and McMullen, 1984: 10). Four of these countries also accounted for the highest share of total developing-country manufacturing value added: in 1980, these were Brazil, Argentina, Mexico, and India (Kirkpatrick et al., 1984: 15, calculated from UNIDO, 1983).

My initial study based on fieldwork was carried out in India; a comparison was needed with a second, geographically large country belonging to the category of NICs, with the different forms of production in them. In India large, small-scale and artisanal production not only exist, but also are separately taken into account in developing industrial policies. Mexico was chosen as offering a comparison with a certain

contrast. Although it also has an industrial sector with different forms of production, in the development of industrial policy the large-scale sector has much greater importance than the others. The implicit question is whether this leads to substantial differences in the way production units make use of women's labour.

A second major choice in this study concerns the industrial sectors selected. Agro-industries was the main category from which sub-sectors were chosen. These sectors are still among the more important sectors for Third World countries. In 1979 they represented 34% of total manufacturing output, and 64% of employment (UNIDO, 1985a: 20) (5). In the model of industries given by Evers and de Groot (1978: 27-42), they come under the category of 'assembly' industries, with a high factor intensity in labour, and low intensity in capital. Sub-sectors from several agro-industries were chosen; i.e. from food-processing (ISIC 311-313), textiles/clothing (ISIC 321-322), and leather products and footwear (ISIC 323-324) (6).

The extent of women's employment in agro-industries is a second important sector criterion. In earlier case studies, researchers have shown that women are an important part of the work force in these industries. The most well-documented sub-sector is the textile/clothing industry which predominantly employs women (see ILO, 1985, for an overview). In food-processing industries, where production occurs largely in very small production units, employment figures for women are scarce (see e.g. UNIDO, 1985b: 13).

In the countries chosen for this study, figures are available for India on women's employment in agro-industries from 1982. These indicate that recently almost three-quarters of women's industrial employment has been in agro-industries (ILO Yearbook of Labour Statistics, 1986). For Mexico, figures are available only for total employment, and separate figures for women are lacking. These indicate that some 18% of industrial employment occurs in agro-industries. However, a last caveat regarding such data must be given: these figures strongly underestimate the extent of small-scale and artisanal production.

The third choice in this study is that to confine attention to women production workers. This means that women entrepreneurs, secretarial staff and technical personnel are not included in the population of this study. This has been done because women production workers - in general - have no 'choice' but to work in order to ensure their own and their children's survival. This situation differs from middle-class women, for whom work can also be desired to give a certain amount of self-realization. Given this situation, it seemed important to concentrate first on women production workers.

## 2.3. Research methodology and data bases

The research methodology used in this study rests on the use of case studies.

The choice to use case study material was based on the advantages of this type of data base over surveys. The depth and quality of the material available is much greater than usually provided by a survey. The depth of the material allows one to enquire into the reasons why a particular proposition may or may not be true directly, from the available material, rather than necessitating a further study. The empirical results also tend

to be fairly reliable, due to the fact that interviews were extensive and on location, and carried out primarily by researchers.

A disadvantage is that such studies provide limited potential for generalizations. However, at this stage, it is necessary to extend our understanding of the factors which influence women's industrial employment before attempting to measure the extent to which the phenomena occur. While empirical material from the case studies will not show beyond a shadow of a doubt which and to what extent the propositions are correct, it has heuristic value and does indicate whether the propositions are plausible.

The final criterion choice to be made in preparing this study was that of the particular sub-sectors to be considered. In addition to employing a large number of women, it was necessary that material detailing that employment be available. In India in 1982, the food-processing sector absorbs more women workers than any other - 170,000 acknowledged women workers (ILO, 1986). However, a study encompassing the whole sector was not practicable, as it is composed of very dissimilar sub-sector, e.g., canning of fruit and vegetables, sugar processing, shrimp processing and the processing of edible oils. Shrimp processing was chosen as a sub-sector for which case study material was available and comparable.

The Indian sector with the second-highest employment of women is the textiles - 142,000 acknowledged women workers in 1982 (ILO, 1986). Within the textiles sector, there are differences in the processing of coir, cotton, and wool. Therefore, a further choice was made to concentrate only on cotton cloth production, as this is a major product throughout the industry. For this case study, I carried out field research in an important south Indian textile center during a fourteen-month period.

In Mexico the shoe industry was chosen as a third agro-industrial sector. In this sector, an excellent study had been carried out in one of the three areas in which the Mexican shoe industry is concentrated. This study was complemented by comparable research in the same city on the labour market in general, on industrial production structures and on women in the household (the three last studies carried out by members of the Colegio de Jalisco, Guadalajara).

A certain amount of information was also available on the textile industry (Keremitsis, 1984b; Gabayet Ortega, 1986; Piho, 1975). However, in this industry changes in women's employment related to changes in industrial technology occurred largely during 1900-1940. This falls outside the period covered.

The major limitation here in using case study material collected by others is that while they provide information on 1) the extent of women's employment by sub-sector, and 2) changes in women's employment, whiich are relevant to the first two research questions here, no information is given on the third question, which concerns the impact of such employment on women's positions within the household. Only the results from my own fieldwork include information on this point. I have included the results here although the limitations are obvious, because recently interest in production and consumption within the household has grown (e.g. IDS Bulletin, 1984, vol. 15, no. 1; Development and Change, 1987, vol.18, no.2). This interest has largely focussed on households working in agriculture; it should be very useful to carry out similar studies on households whose members work in manufacturing.

Finally, the comparability of the data bases used must be addressed here.

In India, case studies on women's industrial labour were carried out by a group of researchers working within the context of the IDPAD Programme (Indo-Dutch Programme on Alternative Development), including the author. Within the group, a number of aspects of research were coordinated. By and large, similar areas of women's employment were taken into consideration. These included working conditions, wage levels, job experience, and organization as workers. The format of the questionnaire for women workers was also coordinated to increase comparability (7).

In Mexico, the case study on women's employment which forms the major data base was linked with a larger programme on industrial structures, employment and labour markets, and women, carried out by members of the Colegio de Jalisco in Guadalajara. Although the focus of the research questions posed differed among those carrying out particular parts of the research, the format of the questionnaire was quite comparable for all researchers.

Information on the comparability of the different sources used within each case study, and on specific aspects of methodology, can be found at the end of each case study chapter, after the footnotes.

Footnotes to Chapter 2.

(1) A production unit consists of one workplace under one ownership at a single physical location. A firm is an ownership unit, which may include several production units (Kirkpatrick et al., 1984: 3).

(2) Changes in production techniques due to changes in end-product are largely excluded.

(3) This coefficient requires fewer mathematical assumptions concerning the structure of the variables than other techniques. See Appendix for the list of decisions, and the clustering.

(4) A number of southern European countries are also often included, but in this study I am not concerned with them.

(5) Table 2.1. indicates the share of developing countries in world MVA in agro-industries, and their share of employment (UNIDO, 1985: 21-22).

Table 2.1. Share of developing countries in world MVA by agro-industrial branch (%)

| Branch | ISIC | 1963 | 1973 | 1980 |
|---|---|---|---|---|
| Food products | 311 | 13.6 | 13.8 | 15.1 |
| Beverages | 313 | 12.2 | 13.7 | 18.6 |
| Tobacco | 314 | 24.6 | 27.4 | 30.7 |
| Textiles | 321 | 17.4 | 17.5 | 18.7 |
| Wearing apparel | 322 | 8.0 | 9.0 | 10.2a |
| Leather/fur | 323 | 10.3 | 10.8 | 12.7 |
| Footwear | 324 | 8.9 | 10.5 | 11.1 |
| Wood and cork | 331 | 9.0 | 9.4 | 12.0 |
| Furniture and fixtures, excluding metal | 332 | 6.8 | 6.0 | 7.5 |

Source: UNIDO data base; in UNIDO, 1985.

(6) UNIDO also includes wood, tobacco and furniture among the sub-sectors.

(7) This does not mean that some specific research questions were not different among members of the group. Pore concentrated also on women's 'world view' and how it has changed. I also considered effects on women's position in the household. Rao and Husain gave particular emphasis to one type of labour - women's domestic outwork.

# Part II. CASE STUDIES ON WOMEN'S LABOUR: INDIA AND MEXICO

## CHAPTER 3. INDUSTRIAL POLICY, FIRM STRUCTURES, AND WOMEN'S EMPLOYMENT IN INDIA AND MEXICO.

In this chapter, the industrial development models used by India and Mexico are briefly described, as a background to the following chapters concerning women's employment in certain manufacturing industries. The types of policies pursued by both countries and the extent of industrial growth are dicussed. At a more specific level, the variety of forms of production and their linkages are taken into consideration. Finally, employment patterns - focusing on women's role in total employment patterns - are briefly described.

### 3.1. India

#### 3.1.1. General

The area of India is some three million square kilometers. It is commonly divided into four main regions, which vary widely in climate and vegetation. The population in 1985 was 765.1 million inhabitants. Its population growth rate has remained high and steady; between 1965-1980 it was 2.3%, and between 1980-1985, 2.2% (World Bank, 1987: 254). In 1985, average population density was 182 inhabitants per square kilometer, but there were strong regional differences. The urban population constituted about 25% of the total population. Urban growth rates are higher than population growth rates, and are accelerating slightly. Between 1965 and 1980 annual average growth rates were 3.6%, and between 1980 and 1985, 3.9% (World Bank, 1987: 266).

Internal migration within India does not play a very important role in regional disparities in population concentration; only 4% of the population lives outside the state of birth (de Bruijne, 1986: 22-23). However, the migration which does occur, is oriented towards the industrial areas, tea plantations, and areas newly opened for agriculture.

India belongs to the category of low-income countries. In 1985 per capita GNP stood at 270 US$. Average annual growth rates in per capita GNP between 1965 - 1985 were 1.7% (World Bank, 1987: 202). Income distribution is very uneven. In 1975-76 the lowest 20% of the population received 7.0% of household income. The second quintile received 9.2%, the third 13.9%, the fourth 20.5%, and the highest quintile 49.4% (World Bank, 1987: 252).

In the Indian economy, the relative importance of the various economic sectors and their contribution to the domestic product has shifted in the period 1960 to 1985 (see Table 3.1.). The share of agriculture in gross domestic product (GDP) has declined substantially over the total period, and now contributes only 31% to the gross domestic product. Nevertheless, agriculture has shown a steady growth rate over the last twenty years. Between 1965 and 1980, it grew at an annual average rate of 2.8%, and between 1980 and 1985 at an annual average rate of 2.7% (World Bank, 1987: 206). The contribution of the industrial sector to GDP has grown from 19% to 27% between 1960 and 1985. Its annual average growth rates were high until 1965 (7.5%), and then declined. Between 1965 and 1980, average annual growth rates were 4.1%. Between 1980 and 1985 rates once again picked up to 5.4%. In 1985-86 and 1986-87 the growth rates increased

even further to resp. 8.7% and 9.1% (Gov. of India, 1987-88: 32). The contribution of the service sector grew from 29% to 41% of GDP between 1960 and 1985. This sector shows the highest annual average growth rates of all, sustained over the whole period. From 1965 to 1980, its annual average growth rate was 4.8%, and from 1980 to 1985, 7.5%.

Table 3.1. Contribution to national production of economic sectors in India

| | 1960 | 1970 | 1975 | 1980 | 1985 |
|---|---|---|---|---|---|
| agriculture | 52 | 46 | 41 | 37 | 31 |
| industry | 19 | 22 | 23 | 26 | 27 |
| services | 29 | 32 | 36 | 37 | 41 |

Note. The figures for 1960-1975 relate to net domestic product; those for 1980, 1985 relate to gross domestic product.

Sources: EIU Report, 1976.
World Bank, World Development Report,1987.

### 3.1.2. Industrialization: policy and trends

Since Independence India's industrial policy has been based mainly on import substitution, with a heavy emphasis on developing capital goods and intermediate goods industries. This policy was influenced by the Soviet model and a pessimistic view concerning the possibilities of exports at that time. This policy basically remained the same until the mid-seventies. However, each Five-Year Plan placed different relative emphasis on investments made in agriculture, industry, and infrastructure.

The First Five-Year Plan (1951/52 - 1955/56) contained few industrial targets; it included mostly those projects already started or due to start, and focused on increasing the use of existing capacity in industry. The main thrust of investment was in agriculture.

The Second Plan (1956/57 - 1960/61) was geared toward investment in heavy industry, with a strong emphasis on import substitution (Mahalanobis model). The financial provision for industry went from 7.6% in the First Plan to 18.5% in this Second Plan (Frankel, 1978: 132).

In the Third Plan, (1961/62 - 1965/66) the mining and industrial sector received the largest financial outlay of any sector. It received 20% of financial outlay, with transport and communications receiving 19%. Agriculture received only 8.8% in this Plan (Frankel, 1978: 188).

After this period, there were only annual plans until 1969, when the Fourth Plan was redrafted (1969/70- 1973/74). In the 1969 version, industry received 21.5% of total outlay, tranport and communications 22%, and agriculture 15.4% (Frankel,1978: 329). The Fifth Plan (1974/75 - 1979/80) again emphasized industry and mining, which received 26% of the total Plan budget. Transport and communications received 17.5%, social services 17.4%, and agriculture 11.8% (Agrawal, 1981). However, the Plan was largely irrelevant; first the oil crisis made it unrealistic, and then with the fall of Mrs. Gandhi's government it was put aside. The Janata government, which was then enstalled, wrote a Five-year plan for the period 1978-83, during which the plan was adapted every year according to results.

However, in 1980, when the Congress (I) party came back into power, the Janata government Plan was abandoned, and a new 6th Five-Year Plan was drawn up for the years 1980-1985. In it, 27% of the total Plan outlay was reserved for the energy sector (particularly oil), 16.2% was reserved for transport and communications, 13.6% for large and medium industries, and 11.3% for rural development and agriculture, with another 12.5% for flood control and irrigation (Agrawal, 1981: 791-92). The Seventh Five-Year Plan covers the period 1985-1990. Here, agriculture receives 20.3% of the total, mining and manufacturing 32.5%, transportation and communication 24.2%, and services 24.2% of total outlay (Gov. of India, 1985: vol.I.).

These figures suggest that industry and infrastructure have received a primary emphasis in India's Development Plans over a long period of time, and agriculture has remained at approximately the same level.

Industrial policy has been based on the concept of the 'mixed economy'. Certain industries come under state auspices, and others would be left to the private sector. A last category would become progressively state-owned. Several methods have been used to carry out these industrial policies. The first was the creation of public sector units with long-term investments in infrastructure and basic industries (including paper, petrochemcials, oil refining, cement, iron and steel, fertilizers and pesticides) as well as certain manufacturing industries (sugar, textile and clothing). The second was the licensing of private sector units. The main goals of the licensing system were to a) enforce planned investment patterns, b) counteract trends towards monopoly and concentration of wealth, c) create a regional balance in location of industries, and d) protect the interests of small producers. The third method was to reserve production of a number of goods for the 'small-scale sector'.

The legal basis for implementing the licensing policy was the Industries Act of 1951, and the Industrial Policy Resolution of 1956. The first indicated the licenses necessary to set up a new unit, substantially expand an existing unit, and/or to change the product mix of a unit in the large-scale private sector. The Resolution of 1956 demarcated the sectors in which the state alone was allowed to develop units, those which were to be progressively acquired by the state, and those which were to be left solely for private entreprise. The Monopolies and Restrictive Trade Practices Act, 1969, was introduced to restrict concentration of ownership and capital in very large firms.

Another important basis for policy was the idea of stimulating small-scale, labour-intensive production (1). It was to provide employment during the period of industrialization for large groups of people. The idea was that large-scale industry would be too capital-intensive to create employment growth on the scale needed, but that small-scale enterprises could provide a more labour-intensive type of production. Therefore, industrial policy was to give special attention to a) protection of existing cottage/household industries, and b) stimulation of relatively small-scale capitalist enterprises in order to create additional employment for a fast-growing population (2).

The stimulation of the small-scale sector included both protective and positive measures. One of the most important positive measures has been a fiscal policy of differential excise duties and exemptions, which increases the competitiveness of small firms versus large ones (Nagaraj, 1984: 1439). In addition, since the nationalization of the banks in 1969, small-scale sector lending has become a priority area. Protective measures include restrictions on large-scale factory production by licensing of

capacity, and legislation (Monopolies and Restrictive Trade Practices, and the Foreign Exchange Regulation Act). Reservation of an increasing number of products for production only in the small-scale sector, has also strengthened this sector.

The actual trends in industrial production show a period of rapid growth from 1951-65, and, from 1965-80, a period of stagnation. As stated before, average annual growth rates were 7.5% for the first period, and 4.1% during the second period. Since then, growth rates have gone up again to 5.4% betweeen 1980-1985. In 1985-86 the growth rate in the industrial sector was 8.7% and 9.1% in 1986-87.

Until 1965, the proportion of basic goods and capital goods grew, relative to consumer goods and intermediate goods (3). Since that time, only the proportion of capital goods has grown, whereas other types of goods have declined in importance. Between 1965 and 1980, consumer goods went from 41% to 35% of production, and intermediate goods from 19% to 16%. Basic goods remained stagnant at 31% (Ahluwahlia, 1986: 3). Growth rates for 1981 - 1987 for basic and capital goods industries were higher than for intermediate goods and consumer goods. However, within the consumer goods industries, the durable consumer industries showed the highest growth rate of all (between 15 and 20% annually from 1984-1987) (Gov. of India, 1987-88: 32b).

The role of exports from India has always been relatively small compared to total industrial production. This is true even now, when policy provides more of an impetus for exports. Between 1970-1980 exports as a whole grew from four to 6.5% of GNP (at factor cost) (Chisti, 1985: 42). In 1984-85 it was still 6.1% of GNP. Despite the fact that there has been little overall growth in India's exports, there has been a change in composition. In the 1960s, the traditional exports (tea, jute, and cotton textiles) declined from 52% of total exports to 22% (in mil. $). The growth in total exports which occurred at that time was caused in great part by eight 'non-traditional' export items which started from a small basis in the sixties and increased five-fold by the end of the decade. These included engineering products, garments, and electronics.

For the 1970s a more general picture can be obtained. Agro-based products remained fairly stable at 34% of total exports (in rupees); mineral-based products also remained steady at 15%, as did textiles and garments at 24%. Leather and leather manufactures grew from 5 to 7.5%, and engineering products from 7.5 to 11.5% (Chisti, 1985: 48). In the eighties, the composition of exports has changed. Agro-based products were 28.5% of total exports in 1981-82, mineral-based products had gone down to 5.9%; textiles and garments had declined to 13.4% (de Bruijne, 1986: 67).

### 3.1.3. Industrial structure

In this section, several basic characteristics of India's industrial structure are discussed. These characteristics concern a) concentration by region and sector, and b) types of firms and their linkages.

#### Regional and sectoral concentration

A first aspect of industrial structure is the degree of regional concentration of industrial production. The Annual Survey of Industries (1976-77) indicates that, out of twenty-five states and seven Union Territories, nine states account for 82% of total industrial output, 76% of invested capital, and 82% of employment (IIPO, 1979: I). Maharashtra has the largest concentration of industrial output (24% of the total), followed by West Bengal, Gujarat, and Tamil Nadu, each with some 10-11% of total output. In 1984, Maharashtra was still the leader, folowed by Gujarat, Tamil Nadu, and West Bengal in that order (de Bruijne, 1986: 89).

These four states are leaders in many industries. Maharashtra dominates, for instance, in food products, cotton textiles, paper, chemical products, machinery and machine tools. Tamil Nadu is first in industrial output in the leather industry, second in non-metallic minerals, machinery and machine tools, and third in cotton textiles, paper, printing, etc., and chemical products. (IIPO, 1979: IV).

#### Firm structure and linkages

India's industrial structure also shows a great deal of complexity in the structure of firms. Traditional cottage industries (defined as production by a family/household unit) have existed for a long time; the products made have been based on caste affiliation. In the nineteenth and twentieth centuries, the creation of large-scale factory production in India led to increasing difficulties for traditional cottage industries (4), where it concerned similar products (such as textiles).

Currently, the large and medium-sized firms monopolize certain industries to a large extent. Swaminathan (1983) indicates that out of forty industrial products seven are made only by one firm, and out of 33 products, more than 50% of production occurs in one firm. Such firms are also linked to 'industrial houses', conglomerate firms with production units in many branches of industry. Some 85% of all sales from large- and medium-scale firms went by way of 'industrial houses' in 1982 (de Bruijne, 1986: 60).

Aside from private large-scale industry, the Indian government has invested extensively in industrial production. Some twelve industry branches, especially basic industries, are reserved for state-owned enterprises. They represented 40% of total industrial investment during the Sixth Five-Year Plan period.

It is possible, with some difficulty, to trace the development of the small-scale and tiny sector; the following discussion is based on two surveys carried out by governmental organizations.

The first source, an article by B. Jahan (1978), indicates the contribution of both the tiny and small-scale sectors, in relation to the large-scale sector in sixteen selected industries, on the basis of data collected within the Annual Survey of Industries (see Table 3.2.). It covers the years 1974-75, and highlights number of units, production and employment ratios. The tiny and small-scale sector together form the

Table 3.2. Factory type and principal characteristics for selected industries (in %)

| Industry | No. of units | | | | No. of employees | | | | Gross output | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Tiny sector | Small scale sector* | Large scale sector | Total sector in nos. | Tiny sector* | Small scale sector | Large scale sector | Total sector in nos. | Tiny sector | Small scale sector* | Large scale sector | Total factory sector |
| Edible oils and fats | 66.6 | 25.1 | 2.3 | 2408 | 48.8 | 36.9 | 11.3 | 64,273 | 36.2 | 44.3 | 16.6 | 95,768 |
| Matches | 58.8 | 3.7 | 2.2 | 272 | 56.5 | 4.6 | 27.8 | 27,522 | 42.6 | 4.6 | 46.5 | 60,04 |
| Utensils and cutlery | 63.7 | 30.7 | 2.1 | 919 | 38.3 | 37.8 | 21.9 | 25,181 | 25.8 | 40.0 | 33.1 | 108,83 |
| Hard tools and general hardware | 48.0 | 40.1 | 7.1 | 1196 | 17.0 | 35.3 | 47.2 | 52,299 | 11.0 | 30.3 | 58.1 | 189,97 |
| Textiles, garments, etc. | 49.3 | 26.9 | 4.8 | 464 | 27.0 | 38.5 | 33.4 | 26,597 | 25.2 | 41.2 | 32.0 | 85,09 |
| Electrical apparatus, appliances and parts | 54.3 | 32.3 | 9.4 | 619 | 14.9 | 26.3 | 57.7 | 40,119 | 8.7 | 22.6 | 68.1 | 163,62 |
| Knitting mills | 58.7 | 26.9 | 2.2 | 739 | 40.7 | 44.6 | 13.6 | 14,485 | 30.2 | 52.7 | 16.7 | 133,16 |
| Bakery products | 63.0 | 10.2 | 6.2 | 422 | 28.4 | 11.5 | 58.6 | 17,817 | 15.8 | 7.3 | 76.0 | 107,87 |
| Rubber products (except footwear, tyres and tubes) | 34.5 | 46.6 | 7.9 | 592 | 14.1 | 37.6 | 46.6 | 29,992 | 7.7 | 34.7 | 56.9 | 136,76 |
| Soap and other toilet preparations, (incl. cosmetics, perfumes, tooth paste) | 50.0 | 24.0 | 8.3 | 312 | 18.8 | 22.1 | 54.2 | 21,713 | 7.9 | 6.8 | 83.7 | 369,41 |
| Bicycles, cycle rickshaws and parts | 47.7 | 35.6 | 6.9 | 581 | 14.6 | 29.8 | 54.0 | 25,787 | 10.5 | 24.2 | 64.7 | 116,77 |
| Footwear (incl. leather, rubber and plastic) | 38.9 | 39.5 | 5.4 | 365 | 12.8 | 17.2 | 68.0 | 26,582 | 11.5 | 22.5 | 64.5 | 94,48 |
| Medical and surgical and scientific equipment | 47.1 | 35.7 | 10.4 | 367 | 12.7 | 25.2 | 61.9 | 21,583 | 12.0 | 26.5 | 61.4 | 68,15 |
| Radio, TV and transmitting receivers, allied electrical equipment | 38.0 | 37.0 | 13.4 | 300 | 5.3 | 11.8 | 80.6 | 49,758 | 4.0 | 13.0 | 82.3 | 205,21 |
| Stationery articles | 50.5 | 27.5 | 5.0 | 277 | 29.5 | 33.7 | 34.6 | 7,820 | 14.4 | 20.6 | 64.0 | 29,29 |
| Watches and clocks | 48.5 | 34.3 | 16.2 | 99 | 11.0 | 19.9 | 68.5 | 7,149 | 2.9 | 13.2 | 83.4 | 27,15 |

Source: Jahan, 1978.

majority of production units; on average they constitute resp. 51.1% and 29.8% of the total number of units. The large-scale sector on average forms only 6.9% of all units. The small-scale sector has the largest percentage of units in 'handtools and general hardware', 'rubber products'. 'footwear', and 'radio, TV and receiving sets'. The large-scale sector, however, contributes the most to employment, more than 50% in most industrial branches. This sector also dominates in gross output, for most industries.

A second source of information on the small-scale sector is a sample survey conducted by the Reserve Bank of India in 1976-77 among small-scale units assisted by the bank and its associates (Nagaraj, 1985: 1743). This shows that since the mid-sixties the number of registered small-scale units has increased perceptibly. Textiles, food products, leather and furniture are dominant in numerical terms, whereas chemical and engineering industries are more important in percent of value added (Nagaraj, 1985: 1744) (5).

More recent information on the small industry sector is available from the Seventh Five-Year Plan. This indicates that 50% of production value and 80% of employment in India was concentrated in this sector in 1984-85. The traditional small-scale industries include: khadi, village industries, handloom, sericulture, handicrafts and coir. The modern industries include 'small-scale industries' (which includes the sectors mentioned before in this section) and powerlooms. The share of traditional industries is small in terms of production value (12% of total value), but their share of employment is large - 52% of a total of 31,500,000 persons in 1984-85 (Sandesara, 1986: 191).

A comparison of small-scale industries - using Nagaraj's source - and the corporate sector indicates that the profitability and capital efficiency of the small-scale sector is much higher than of the corporate sector. The reasons for this seem to lie in the lower wages and 'greater exploitability of labour' on the one hand, and fiscal concessions on the other (Nagaraj, 1985: 1746).

Nagaraj also investigates the linkages between the large-scale factory sector and the various types of production units outside the large-scale sector. The main types of linkages found were ownership and subcontracting of production. Subcontracting refers to inter-firm relationships where large firms procure components, sub-assemblies and products from small firms. It is clear from the types of policies developed by the Indian government that the general supposition among entrepreneurs and policy makers after Independence was that factories would drive out small production units if they were not given protection - i.e. these two types of units were in competition, and were not expected to be inter-related. However, among both groups this view has gradually changed to one in which 1) the larger firms are seen to make use of small firms, and 2) a fairly close relationship between the two is accepted (with both benevolent and negative effects).

This process began when owners of factories began to see possibilities for using the advantages given to the small-scale sector for their own benefit, by a) subcontracting out parts of their production, and b) becoming owners of a number of small-scale 'independent' units. Tyabji (1984: 1427) suggests that by the time of the Fourth Five-Year Plan the tendency of large capitalists to own numerous small-scale units was so prevalent that several members of a committee writing legislation for small-scale sector development wrote a dissenting note on this problem.

A less attractive (but legal) way for owners of large-sale units to make use of small-scale units was the 'ancillary development programme', in which small units could 'produce parts, components, sub-assemblies and tolling for supply against known or anticipated demand, of one or more large units manufacturing complete products'. The problem of the ancillary units for big business was that legally they had to be independently owned, and preferably had to supply several units simultaneously. Given the alternative possibility of setting up a small-scale unit without such limitations, it is not surprising that not much use was made of the ancillary development programme by large business interests (Tyabji, 1984: 1429-1431).

Actual knowledge of the extent of subcontracting, as well as ownership of small-scale units by large business interests, is very limited. Nagaraj (1984) has collected information from several sources. From the sample surveys conducted by the National Small-scale Industries Commission (NSIC) on the marketing behaviour of small enterprises, he concludes that a majority of units produced intermediate goods and sold them directly to larger units in the public and private sector. On the basis of his sample, Nagaraj concludes that a) the use of subcontracting has grown since the sixties, b) parent firms provide some sort of technical guidance but little financial assistance, c) government policies have actually encouraged the trend and d) exploitation of cheap labour is one of several motives for firms to subcontract.

Although overall knowledge is fragmentary, case studies within various industries show that subcontracting is fairly prevalent. Harriss (1982: 997-998) describes the machine tool industry in Coimbatore, in which production subcontracting exists in 40-50% of the workshops he studied. This included both finished products and parts production. Kalpagam mentions extensive subcontracting as well in the garment industry in Madras (1981: 1957).

### 3.1.4. Employment: legislation and trends

In describing employment trends in India, a number of methodological difficulties arise. To begin, the definition of 'worker' has varied from one Census to another (not to mention other sources of data, such as the National Sample Survey). In 1971 a more restrictive definition was used than in 1961, excluding all types of part-time workers. This tended to exclude women, children and people with irregular types of jobs (ARTEP, 1981: 26). In the 1981 Census, the definition of worker was expanded again. A second problem is that employment in the unregistered small-scale sector and in household industry is included in the Census only every ten years, and even then is undercounted, particularly where it concerns unpaid family workers. With these warnings in mind, the following trends emerge from the official figures.

In India the proportion of the total population that was counted as being economically active was 39% in 1951, 33% in 1961, and 37% in 1981. If one excludes children under 14 from the total possible working population - which is not correct, because a large percentage of children actually work - then according to the census some 60% of the total population is counted as being economically active. In a country in which the per capita income is still very low, it seems unlikely that this figure can be correct. Therefore, a quite substantial proportion of people who are economically active are presumably not counted as such.

The same problem applies to figures for economically active women. The percentage of economically active women in the female population was 23% in 1951, 28% in 1961, 13% in 1971, and 20% in 1981, but there is some argument as to whether this was due mainly to the differences in definitions used or whether there were actual changes in women's economic activities (ARTEP, 1981: 24-26). The percent of women in the total labour force has also varied. In 1951 it was 29%, in 1961, 32%, in 1971, 17%, and, in 1981, 26%.

Legislation and policies

Before employment trends are described, a short summary will be given of existing labour legislation and policies concerning women as workers.

Labour legislation was initiated in the 20's and 30's. The main Acts remain the Factories Act and the Indian Trade Unions Act. The former specifies the type of production unit conforming to a 'factory' and the working conditions it should have, and the second the conditions under which new trade unions can be formed (Agrawal, 1981: 554-555).

After Independence, several other labour laws pertaining to workers in the organized sector were introduced. These include the Minimum Wages Act, which gives state and central government the right to fix minimum rates for certain occupations and trades, the Industrial Disputes Act, which regulates conflict settlement, and the Payment of Bonus Act, which regulates the payment of an annual bonus to workers. There is special labour legislation directed toward women workers (and children) which provides extra protection regarding a) dangerous working locations, b) prohibition of night work, and c) maternity leave (N.C.o.t.S.o.W., 1974: 190).

In practice, trade union activity is often necessary to force employers to actually implement these laws in factories, and the degree to which this is done varies widely by state, region and industry. Nevertheless, the fact that such labour legislation is applied only to the organized sector may make recruiting workers outside this sector an attractive alternative.

Aside from labour legislation, there has been no explicit employment policy regarding women workers in the period between Independence and the Sixth Five-Year Plan (N.C.o.t.S.o.W., 1974: 306-308). Before that, the Plans developed only a welfare approach toward women. They were considered to be the weaker part of the family, and as such needed protection. Such measures were lumped together under mother and child care. The change in approach apparent in the Sixth Five-Year Plan was initiated by the report on the Status of Women in India, published in 1974 by the National Committee on the Status of Women. This indicated clearly both the important economic role the majority of non-elite women played in India, as well as their needs for recognition and protection of their worker status, in addition to the traditional support for their family roles.

Organizational change was initiated within the government by introducing a Women's Cell in the Department of Labour. The Sixth Plan focused not only on education and health for women, but also included employment as a separate aspect. A series of policies regarding women's employment were mentioned in the Plan: 1) women should receive a larger

share of employment opportunities, 2) their skills should be developed by training, 3) family aid services should be developed, 4) there should be appropriate support to self-employed women, and 5) grass-roots organizations should be promoted (cooperatives and marketing federations). The latter two policy aspects are particularly important, given the fact that the majority of women in non-agricultural employment work in the unorganized sector (90% in 1979). In the Seventh Five-Year Plan, women's role as worker is acknowledged, and special attention is focused on protecting this role. Measures to be taken include a) treating women as specific target groups in all rural development programmes, b) ensuring women's control over assets and resources in asset endowment programmes, c) diversification of vocational training facilities for women, d) to encourage appropriate technologies, equipment and practices for reducing drudgery and increasing labour productivity, e) providing creche facilities and family planning centres, f) establishing marketing estates at the State level, g) increasing women's participation in trade unions and in decision-making, and h) improving and enlarging the scope of existing legislation for women workers (Gov. of India, 1985: 121). It is still too early to assess the overall effect of these proposed institutional changes on women workers. Suffice it to say that they presumably will affect women workers in the organized sector more immediately than those outside it.

Employment trends

The percentage of the population working in agriculture decreased significantly between 1961 and 1981, although more than half the working population is still in this sector. The percentage of people employed in the manufacturing and service sectors remained at the same level from 1961 to 1981. In the 1981 Census, a large category of 'undefined workers' has emerged - 9% - which indicates a methodological problem of some size (see Table 3.4.).

Table 3.4. Employment trends of economically active population in India (in %)

| | 1971 | | | 1981 | | |
|---|---|---|---|---|---|---|
| | M | W | T | M | W | T |
| agri-culture | 69.8 | 81.4 | 73.6 | 64.3 | 57.5 | 62.6 |
| manufac-turing | 12.2 | 9.5 | 11.3 | 14.8 | 6.6 | 12.6 |
| services | 18.0 | 9.2 | 15.1 | 14.6 | 6.6 | 15.8 |
| not ade-quatly defined | | | | 2.0 | 29.2 | 9.0 |

Sources: ILO Yearbook of Labour Statistics, 1986 (1981 figures).
ARTEP, Women in the Indian Labour Force, 1981 (1971 figures).

The majority of women were still active in the agricultural sector in 1981: 57% of all working women. In manufacturing and services, the percentage of working women is still low, but women are equally divided over both sectors. In the 1981 Census there has been a decrease in the percentage of women in each sector in comparison with previous Censuses (see Table 3.4.). However, the conclusion that women's rate of participation in industry and services has decreased over the years is not justified, due to both revisions of definition of workers and the large category of not well-defined activities which has emerged in the latest Census (29% for women).

Within the manufacturing sector, women are concentrated in a small number of industries. These include food manufacturing, textiles, and tobacco as the major industries where women work - the more labour-intensive industries (see Table 3.5.).

Table 3.5. Women's employment by industry in India.

| branch | 1976 | 1983 | (x 1000) |
|---|---|---|---|
| food manufacturing (311-312) | 154 | 158 | |
| tobacco ( 314) | 114 | 118 | |
| textiles (321) | 116 | 130 | |
| industrial chemicals (351-352) | 33 | 54 | |
| non-metallic mineral prod. (369) | 21 | 19 | |
| iron and steel (371) | 10 | 15 | |
| electrical machinery (383) | 19 | 28 | |
| total | 514 | 599 | |

Note. Only the industries in which substantial numbers of women work are included. Figures refer only to employees and working proprietors and do not include various forms of casual labour.

Source: ILO Yearbook of Labour Statistics, 1986.

Figures on employment in industry by size of firm must be compiled from different sources. For factories, these have been compiled for the period 1963 to 1972 from the ARTEP Report (1981: 114), and for 1971-1979 from the Sixth Five-Year Plan (Annexure 27.2). The first serie of figures indicates that the total number of industrial workers increased from 3.8 million people in 1963 to 4.5 million in 1972. The percentage of women workers in factories went down from 10.4 to 8.7%. More recent limited figures covering employment in the organized sector show that between 1971 and 1979 women's employment remained steady, at 9% -10% of total employment (Directorate General of Employment and Training, in Sixth Five-Year Plan, Annexure 27.2). In absolute numbers, there was an increase from 422,000 women to 573,000 women. This seems to indicate that employment for women in the organized factory sector is on the increase again.

The type of labour relations in which men and women work can be compared by type of production unit, using information given by the 1971 Census. In Table 3.6.A., figures comparing the percentage of women workers to total workers indicate that women are more concentrated in household

industry than men. In household industry women make up 21% of all workers, whereas in non-household industry they are only 10%. This relationship holds true for each type of labour category as well. In Table 3.6.B., figures indicating the percentage of all women in each category of labour relations, indicate that in non-household industry the percentage of women working as employees or unpaid family workers is larger than the percentage working as single workers or employers - suggesting that women tend to work more often in dependent relationships than men. They form only a minute proportion of the employers (3%), are somewhat better represented among employees and single workers (respectively 11 and 9%), and predominate among family workers (17%).

Table 3.6.A. Percentage of women workers to total workers by status of employment in small-scale and household production in India, 1971.

| | household industry | | | non-household industry | | |
|---|---|---|---|---|---|---|
| | M | W | T | M | W | T |
| employers | - | - | - | 97 | 3 | 100 |
| employees | 79 | 21 | 100 | 89 | 11 | 100 |
| single workers | 83 | 17 | 100 | 91 | 9 | 100 |
| family workers | 76 | 24 | 100 | 83 | 17 | 100 |
| total workers | 79 | 21 | 100 | 90 | 10 | 100 |

Table 3.6.B. Gender division of labour by status of employment and sector in India, 1971.(in %)

| | household industry | | | non-household industry | | |
|---|---|---|---|---|---|---|
| | M | W | T | M | W | T |
| employers | - | - | - | 5 | 1 | |
| employees | 8 | 8 | | 62 | 65 | |
| single workers | 45 | 35 | | 27 | 24 | |
| family workers | 47 | 57 | | 5 | 9 | |

Note. Single workers are self-employed producers.

Source: Census of India 1971, adapted from Kalpagam, 1984.

The percentage of all women (and all men) working in the various types of labour relations, by type of industry is also indicated in the Census. In household industry, the majority of women work as unpaid family workers (57%). A second large group work as single workers (35%). In non-household industry the majority of women are employed in wage labour (65%), and a lesser group as single workers (24%). The greatest differences between men and women lie in the category 'family worker', where the percentage of all economically active women is much higher than the percentage of all economically active men (see Table 3.6.B.).

More generally speaking, it is clear from the table that a) women are concentrated at the 'casual' end of the continuum in terms of labour relations, with family relationships predominating, b) women have less opportunities than men for becoming producers in their own right - fewer women than men are single workers or employers, and c) women are more heavily represented in household production than in non-household production.

## 3.2. Mexico

### 3.2.1. General

The area of Mexico is some 1.9 million square kilometers, making it one of the large newly industrializing countries. In 1985 its population numbered 78.8 million people. The rate of annual population growth is slowly decreasing, although it is still high. From 1965 - 1980, the average annual growth rate was 3.2%, and during the period 1980 - 1985 it decreased to 2.6 (World Bank, 1987: 255). Population density on average is not very high - 30 people per square kilometer- , although this varies widely by region. There is heavy internal migration from rural areas to urban areas and to areas of rapid industrial development (Vellinga, 1986: 55).

The urban growth rate has been higher than the overall rate of population growth. In the period 1965 - 1980, the annual average growth rate was 4.5%; in 1980 - 85, it slowed to 3.6% annually from 1980 - 1985 (World Bank, 1987: 267). Currently, the urban population is 69% of the total population, with urban centres being defined as those with more than 10,000 inhabitants. The greatest concentration is in the Federal District, where economic activities are most concentrated. Other areas of concentration are Monterrey and Guadalajara, as well as the northern frontier region, all areas of industrial development.

Mexico belongs to the category of upper middle-income countries, with a per capita GNP of 2080 US$ in 1985, and an annual average per capita GNP growth rate of 2.7% between 1965 and 1985 (World Bank, 1987: 203). Income distribution is very uneven. In 1977, the lowest quintile of the population received 2.9% of total household income, the second quintile 7.0%, the third quintile 12.4%, the fourth quintile 20.4%, and the highest quintile 57.7% of total household income (World Bank, 1987: 253).

In the Mexican economy, the relative importance of the different economic sectors shifted between 1970 and 1980. The contribution of agriculture to the gross domestic product has decreased from 12% to almost 9% in that period (SPP, 1982: 103). In 1985, the relative contribution to GDP was 11% (World Bank, 1987: 207). Growth rates in agriculture have slowed only gradually; between 1965-1980 they showed a 3.2 average annual growth rate, and between 1980 and 1985, 2.3% (World Bank, 1987: 205).

The contributions of the industrial sector to GDP grew from 32.7% to 35.4% during the period 1970-1981. In 1985, it stood at 35% of GDP. Growth rates in the industrial sector were high between 1965 - 1980, and showed an average annual growth rate of 7.6. In the subsequent period between 1980 - 1985, they collapsed to 0.8% , as a result of the current crisis. Plunging oil prices also meant a drastic reduction of growth in that sector, which had contributed substantially to overall growth before.

The service sector makes a larger contribution to gross domestic product than the industrial sector. It has remained steady at around 56% in the period 1970-1981; in 1985 it was 54%. Growth rates in the services sector show the same trends as in the industrial sector. Between 1965 - 1980 the average annual growth rate was 6.6 %, but between 1980 - 1985, it crashed to 0.8 (World Bank, 1987: 205).

3.2.2. Industrialization: policy and trends

The industrialization process in Mexico has a relatively long history. It began initially in the Porfiriato period (second half nineteenth century), during which foreign investors were encouraged to come to Mexico. The concentration of economic power and wealth in the hands of a small group of political figures and industrialists was an important reason for the Mexican Revolution (1910 - 1920). The turbulent period of the Revolution led to major changes in the existing social structure. The power of large landowners and the Catholic Church to a large extent disappeared, and was replaced by a national government which was supposed to guarantee the rights of the weaker social groups - peasants and workers - as well as those of the domestic bourgeoisie (Wynia, 1978: 261). Under the regime of the first two presidents, this alliance of various social groups worked,to some extent (5), although there is discussion among various authors regarding the extent to which protection of the weaker social groups actually did occur (Wynia, 1978; Cockcroft, 1983; Fitzgerald, 1979). Between 1940 and 1954, the state had a relatively high degree of freedom to act, as a strong domestic urban bourgeoisie and workers had not yet emerged (Fitzgerald, 1979: 51). Since that time the situation has changed, and state economic plans now meet a much greater degree of resistance from vested interests.

The current phase of industrialization in Mexico began during the Second World War, with State industrial policy playing an important role. From 1940 to 1954, industrial expansion was based on competitition among domestic capitalists. Several groups emerged in the industrial and financial spheres, with enough power to put through a new economic model - the stabilizing development model (Fitzgerald, 1979: 52). This policy has consisted of promoting rapid economic growth while maintaining exchange rate and price stability. It has entailed a process of massive import substitution, supported by fairly extensive public sector investment. The state has not only invested in infrastructure, but has also reserved certain 'key sectors' for itself (petroleum and basic petrochemicals, mining, radioactive minerals and nuclear energy), and has invested in enterprises in certain manufacturing industries (sugar, textiles) (UNIDO, 1979: 48).

This policy has been implemented within an extended institutional framework.

First, this consists of four government secretariats with policy functions. The most important one is the Secretariat of Industry and Commerce, which sets industrial priorities, implements policy regarding tariff protection for industry, and, together with the Secretariat of Finance, establishes duties and tax incentives for industry. It also regulates foreign investment and the transfer of technology (UNIDO, 1979: 49).

Secondly, financial institutions channel money to industry. These include the central bank, the Nacional Financiera, the Banco Nacional de Commercio Exterior, and more recently a mixed public/private bank. Extensive and very favorable tax incentives have been given to industries. Credit availability has also been encouraged.

Thirdly, the government has set up public sector enterprises to support industrial activities, which include direct control over infrastructure and strategic resources. The major resource over which the government has control is oil. Basic industries with very high investment costs also come

under the public sector (iron and steel). Government has also taken over industrial units in certain manufacturing industries in conjunction with 'social policies': sugar, in connection with agrarian reforms, and textiles, in connection with employment.

Finally, the institutional framework includes two associations of industrialists: the CONCAMIN (the Federation of Chambers of Industry) and the CANACINTRA (the National Chamber of the Manufacturing Industry). The former represents the interests of large enterprises and companies with foreign investment participation, and is interested in tariff policies which protect its members more effectively. The latter, representing the interests of small and medium enterprises, favours restrictive policies on imported goods and opposes uncontrolled expansion of foreign direct investment (UNIDO, 1979: 52). The two organizations often have opposing views concerning government policy.

The principal financial instruments used to promote industrial development include tariffs on imports, quotas and import licensing, and some stimuli for manufacturing programmes. Over time, the relative importance of the various types of measures has changed.

These economic policies have led to substantial overall growth. From 1966-1973 average yearly growth rates in gross domestic product were almost 8%. Although they declined from 1974-1984 to a yearly average of 5%, this is still a fair growth rate (World Bank, 1987: 183). Import substitution was a basic government policy, and has been realized to a certain extent. From 1939 to 1958 the import component of consumption goods decreased from 22% to 6%. Between 1958 and 1970, the import coefficient went down substantially: to 22% for intermediate and 58% (in 1969) for capital goods (Verkoren en Hoenderdos, 1984: 4).

Despite the fact that import substitution did occur, the level of imports also rose. Exports were increasingly insufficient to cover import costs. In the seventies, the Mexican government relied increasingly on foreign loans to increase its income, leading to a large external debt. This option was chosen because the Mexican government was unwilling to carry out internal socio-economic structural changes (in tax structure) in order to increase its income (Wionczek, 1986: 288). The result was a devaluation of the peso in 1976. Again, the government did not carry out structural changes to increase its income, but depended on an expected positive influence on its balance of payments due to the future income from oil resources (PEMEX). When oil prices slumped at the beginning of the eighties, it became clear that the government could not rely on this source of income. This brought the problem of the external debt to a head. In the crisis of 1982, the peso was devaluated enormously, and the problem of debt repayment brought the government almost to a halt.

Since this crisis, there has been a further shift toward a policy of export oriented industrialization, in which consumption goods and even capital goods are to be exported rather than primary products. The role of export industry has been enhanced, and it has been envisaged that these would become the 'motor' of Mexican economic development. Exports increased to 16% of GDP in 1985 (World Bank, 1987: 221). Annual average growth rates also have increased. Whereas these were 7.7% during the period 1965-1980, growth was 10.1% between 1980 and 1985. However, due to repayment of the external debt, overall growth rates in earnings are still negative on average: -4.1% annually between 1980 and 1985, in comparison to 2.9% average annual growth rates betwen 1970 and 1980 (World Bank, 1987: 217).

### 3.2.3. Industrial structure

The role of the Mexican state in industrial development has been fairly extensive. This is related to the political basis of the state after the Revolution: the role of the church and large landowners was weakened, permitting a new middle-class and a group of industrialists to emerge at a fairly early stage of development (Derossi, 1972: 22). This new class was recruited from several different social groups. A number of people from the category of large landowners went into industry, and a number of revolutionaries who became politicians and bureaucrats later became industrialists (Hamilton and Harding, 1986: 75; Latein Amerika, 1980: 279). In addition, immigrants from Europe contributed new members to the ranks of industrialists. As a result of the efforts of these groups, a fairly extensive and complex industrial structure currently exists in Mexico.

In the following paragraphs a number of characteristics of this industrial structure will be discussed as background for the sector studies presented in the following chapters. These aspects include a) concentration by region and sector, and b) firm structure and labour recruitment.

The regional concentration of industry was high at the beinning of the 1950s, and has remained high ever since. The main concentration of industry is around Mexico City, which in 1965 contained 30% of all industrial plants, 40% of all invested capital, 45% of gross production, and 46% of all industrial employment. The other areas of industrial concentration are Monterrey in Nuevo Leon and Guadalajara in Jalisco. These cities were the focus of significant migration as agriculture became increasingly capital-intensive in the 1950s and 1960s. As the first period of industrialization was based primarily on production of consumption goods, it is not surprising that these cities also became industrial centers.

Industrial concentration is highest in four states. Aside from Mexico City which contains the lion's share of industry, the four states together accounted for 65% of employment, 74% of (acknowledged) wages, salaries and social benefits, 69% of invested capital and 72% of gross production in 1965. If one looks at the number of firms and their regional concentration, Mexico D.F. accounted for 35% of all firms, Nuevo Leon for 4%, Jalisco for 6.4%, and Puebla almost 6% in 1965 (Derossi, 1972). There is also a clear sectoral concentration which differs among these four areas. Leaving aside Mexico D.F., which shows the largest number of firms in all sectors, Jalisco shows the highest concentration in the leather industry, food and metal sectors, and Nuevo Leon in tobacco, petro-chemicals, and steel and iron, whereas Puebla has the highest concentration in textiles and minerals.

An area of industrial growth which falls outside this pattern is the northern border area. There industrial investment has been stimulated since the institution of the Program de Industrializacion de la Frontera Norte (PIF) in 1965. The goal of this program was to rapidly increase employment in manufacturing, create an influx of foreign currency, and increase the transfer of technology. Production was oriented toward export markets, so that it would not compete with domestic industries. Since this Programme was established, it has had a number of shifts. There has been a change in relative production among sectors, including a decrease in the contribution of clothing and shoes, food-processing, and furniture, and an increase in the share of electronics, machinery and appliances, toys and sports articles, and the automobile industry.

In the border area, firms were initially rather small (less than 100 employees). Although these firms often have connections with larger ones, as sub-contractors, daughter firms, or other forms of collaboration, such small firms were in the majority. Recently, more multinational firms have been established directly in the border area, and there is a trend towards more vertical integration, which increases the acknowledged size of firms. This has been accompanied by an increase in capital investment per employee and in the use of shift work (Verkoren en Hoenderdos, 1984: 12).

In Mexico, the majority of firms tend to be limited in size. In 1975 some 80% of all establishments still had fewer than five employees and another 8% fewer than 100 employees (these figures, however, probably contain a underenumeration of clandestine workshops and doemstic outwork). There is a general trend for the firm size to become larger however, as can be seen from the following table. These figures indicate the size of plants rather than ownership patterns. The average size of firms also varies by sector: in the paper, steel and iron sectors, textiles and tobacco, and petro-chemicals, more than half the firms have more than five employees. In other sectors, such as food, beverages, and garments, 70-90% of the firms have fewer than five employees. This does not mean that there are fewer employees, but rather that they are not paid (family labour).

Table 3.7. Changes in distribution of firms by size (by number of employees) in Mexico (1965-75)

| type of establishment | number of establishments | | |
|---|---|---|---|
| | 1965 | 1970 | 1975 |
| family production unit | | 48.0 | 52.6 |
| artisan's unit (0-5 employees) | 84 | 32.7 | 28.1 |
| small industry (6-15 persons) | | 9.1 | 9.0 |
| medium industry (6-100 employees) | 13.8 | 7.8 | 7.8 |
| large industry (> 100 employees) | 1.4 | 2.4 | 2.6 |

Note. More recent industrial censuses do not include this type of information.

Sources: 1965 - Derossi, 1972, The Mexican Entrepreneur, OECD.
1970, 1975 - Alvarez, 1984, El Obrero mexicano, 1.

At the national level, little is known about the relationships between large-scale and small-scale firms. However, case studies carried out in Guadalajara and Mexico City indicate that there are fairly intensive subcontracting relationships between the different types of firms, and that these are a permanent feature of the economy rather than a passing phase (Padilla Dieste, 1981: 25-40).

Subcontracting between firms occurs in various forms. Horizontal subcontracting consists of contracting out production without providing raw materials, whereas vertical subcontracting includes providing raw materials and other inputs (Beneria and Roldan, 1987: 34-35). Lomnitz has characterized the 'maquila' contract as follows: a contract between two

producers in which the contracted firm produces pre-determined goods for pre-determined prices (Lomnitz, 1978: 145). Padilla Dieste (1980: 26) adds the criterion that a subcontracting firm 'keeps strict control over the majority of factors which play a role in the (production) process' (trans.IB).

In Mexico City, vertical subcontracting was the most prevalent, according to the sample study made by Beneria and Roldan (1987: 32). Production was primarily for the domestic market (6). A typical subcontracting chain in Mexico City goes from a multinational company to smaller factories, to workshops, and then to domestic outworkers at home. The transfer from smaller factories to workshops is the turning point between registered and unregistered (illegal) production. Several types of linkages serve to maintain contact between these types of firms. The first is a direct link: the firm gives out work to workshops and/or domestic outworkers without an intermediary. The second is the mediated link: a jobber makes the connection between a firm and workshops and/or domestic outworkers. Finally, there is the mixed link; the connection is centered in a workshop which has both legal and illegal workers and production (Beneria and Roldan, 1987: 35-36). This clandestine nature is characteristic of the Mexican situation (Beneria and Roldan, 1987: 35-36; Alonso, 1983: 165, 170).

The phenomenon of subcontracting in production for domestic markets is not confined to Mexico City. Padilla Dieste describes a similar situation in the clothing industry in Jalisco. She emphasizes the fact that both commercial and production firms contract to workshops and domestic outworkers (1980: 36). The reasons firms give for subcontracting production include factors in the production process as well as labour aspects. Subcontracting can help lower fixed costs (when subcontracting firms produce a few specialized parts), and transfers the risk of fluctuating production away from the main firm. It also avoids organizational problems encountered by family businesses when growing in size. Finally, it lowers labour costs and avoids labour conflicts (Beneria and Roldan, 1987: 38-39).

### 3.2.4. Employment: legislation and trends

An attempt is made here to look at the ways women participate in the total labour force. Two types of information sources are used because of the limitations inherent in each of them: statistical material collected at the national level (census and occupational surveys), and the results of local surveys concerning particular aspects of labour force participation (7).

Aside from the basic problems internal to the census, there are difficulties related to the extent to which women's productive work and the more casual forms of work relationships are acknowledged. Census figures do not include the whole of the economically active population. Women particularly are underrepresented. Even where they are included, their activities are not fully described. In the 1980 census, for instance, almost 30% of the labour force has 'unaccounted for activities'. This is due to various methodological problems inherent in the method of census data collection (Recchini de Lattes and Wainerman, 1986). A second problem is that not all types of industrial activities are included, so that people working in non-registered production units or at home are not

counted. To a certain extent, these two excluded categories will presumably overlap. With these warnings in mind, the trends visible in the official figures will be discussed. Following a brief description of existing labour legislation, the following topics are discussed: the size of the labour force, levels of unemployment and underemployment, and sectoral shifts in employment.

Labour legislation applies only to formally registered firms. This excludes a large number of small firms who try to avoid the costs involved by operating clandestinely. Minimum wage levels are determined yearly, and vary according to regions. Other wage costs add up to 50% to the employers' total wage bill. These include several possible fringe benefits for workers. An important one is the seventh day payment, which entails a payment for an extra day after the worker has worked six consecutive days. This measure is designed to ensure work regularity. A second important item for the worker is the 12% social security tax, which gives a worker access to health care insurance, unemployment benefits, and pension.

By law, women are given extra protection with regard to working hours, dangerous working locations, and fatigue during pregnancy and lactation. It is required by law that those workers protected by IMSS have access to child care facilities. This applies only to workers in registered units.

For domestic outwork, there is separate legislation. Officially, it must be registered by employers with the Labour Inspectorate, and is bound by legislative rules similar to those for employment in the factory in terms of salary, payment of social security, and safety of working conditions. These rules apply mainly on paper (Alonso, 1983: 164-165).

In Mexico in 1980, those registered as economically active include only 32% of the population (some 22 million people in a total population of some 69 million people). Even if one takes into account that in 1980 almost 45% of the population was younger than 15 years, only 54% of the remaining population is considered economically active. This percentage would seem too low in a country in which 60% of the population earns less than the minimum wage. Therefore, it would seem that there is a strong undercounting of the economically active population (8).

However, let us set aside such problems, and concentrate on the labour force data as available. From 1950 to 1980, the rate of labour force participation has decreased slightly: from 49.5% to 45.%. This has been due to several opposing trends. First, the participation rate of men has decreased (from 88.2% to 71.3%). Secondly, the participation rate of women has increased (from 13.1% to 21.5%). Thirdly, there has been an increase in the percentage of young people going to school (Gregory, 1986: 23). Together, these trends suggest earlier retirement ages, and increased opportunities for schooling.

Unemployment figures in Mexico have been available on a consistent basis only since 1973. Previous measures varied in definition and enumeration to such an extent that they are not further discussed here (cf. Gregory, 1986: 67-69). Figures throughout the 1970s from the household labour survey ECSO, indicate that women's unemployment rates are significantly higher than those for men. In 1970, the unemployment rate for men was 2.8%, and that for women 7.5%. In the first quarter of 1979, the comparable figures were 2.8% for men, and 5.0% for women (Gregory, 1986: 74). This tendency existed in all regions of the country surveyed.

Figures during the 1970s indicated a decline in unemployment. This occurred despite the fact that both the concept of 'unemployment' and its coverage was expanded during that period. The decline was almost totally the result of a decline in women's unemployment (Gregory, 1986: 71). This decline must be set off against an increase in women's labour force participation rates. This suggests that employment opportunities for women expanded more rapidly than their labour force participation rates. For men both factors expanded at the same rate. After 1979, recording of unemployment was again limited to three major urban areas (Mexico City, Monterrey, and Guadalajara); at the end of 1982 - during the crisis - official unemployment had risen to 8% in these urban areas.

Official unemployment is higher among young people than others, particularly for the age group 19 - 24. It is also higher for women than for men in these age groups (Gregory, 1986: 74; Rendon, 1982: 168). The reasons for this phenomenon are not very clear. There is no correlation with education, suggesting that this group is not made up of members of higher income families looking for the 'ideal' job (Gregory, 1986: 75). An alternative explanation may be that this group changes jobs more easily, with a larger percentage being temporarily unemployed at any one time (Escobar Latapi, 1986: 262-263). This would also fit in with the explanation that older people on the contrary find jobs that are not counted in labour force participation rather than remaining unemployed.

The official rates of unemployment in Mexico are very low for a Third World country, so that there has been extensive discussion concerning underemployment as a major problem. Evidence is adduced from less-than-full-time employment and low earnings (cf. Gregory, 1986: 88 ff.). However, such measures rather beg the question, as they assume that all working people wish to work full-time, and do not take into account the reasons people may have for working less than the official forty-eight hour week (as do many women), or for accepting low earnings (young people, people working part-time). It is preferable to base generalizations about the extent of underemployment on case studies, which provide better insight into the circumstances surrounding an individual's employment.

There have been substantial shifts in employment by sector, which are discussed on the basis of adjusted census figures by Altimir for the 1960 census and Gregory for the 1980 census (cf. Gregory, 1986: 25-26). In 1940, agriculture still provided employment for the majority of the working population (almost 2/3 of total employment). In 1980, less than 30% of the labour force worked in this sector. Between 1940 and 1980, employment in manufacturing and construction doubled, to include more than 25% of the labour force. The service sector grew to more than 40% of the labour force in 1980.

Comparing employment trends with output, it is clear that all sectors show high growth rates, but that there are variations among the sectors (see Table 3.8.). Agriculture grew in total output and output per worker primarily during the 1940s and 1950s. Its growth slowed during the 1960s. The secondary sector grew vigorously in the 1940s, both in output and employment. During the 1950s increases in output were just as strong, but employment growth lagged behind (Gregory, 1986: 32), increasing only by 46%. During the 1960s, rates of growth in both output and employment increased. Tertiary sector increases closely followed the growth in GDP. This sector reported the highest absolute levels of productivity, and the rate of increase in productivity accelerated from 1940 to 1970.

Table 3.8. Output, Employment, and Output per worker by Sector, 1970 and 1980 (output in 1970 pesos)

| | 1970 | 1980 | annual rate of change |
|---|---|---|---|
| Primary | | | |
| Output (millions) | 54,123 | 75,704 | 3.4 |
| Labour Force (thousands) | 5,377 | 5,503 | 0.2 |
| Output per worker (pesos) | 10,065 | 13,756 | 3.1 |
| Secondary | | | |
| Output (millions) | 145,070 | 296,046 | 7.4 |
| Labour force (thousands) | 3,133 | 5,244 | 5.3 |
| Output per worker (pesos) | 46,305 | 56,457 | 2.0 |
| Tertiary | | | |
| Output (millions) | 250,474 | 481,090 | 6.7 |
| Labour Force (thousands) | 4,352 | 8,204 | 6.5 |
| Output per worker (pesos) | 57,555 | 58,641 | 0.2 |
| Total gross domestic product | | | |
| Output (millions) | 444,271 | 841,855 | 6.6 |
| Labour force (thousands) | 12,862 | 18,951 | 4.0 |
| Output per worker (pesos) | 35,541 | 44,422 | 2.5 |

Source: Gregory, P., 1986, The Myth of Market Failure, Employment and the Mexican Labour Market, World Bank Research Publication.

The conclusion is that there was a shift of employment from sectors with lower productivity (agriculture) to those with higher productivity. In addition, the rate of increase in output per worker accelerated between 1940 and 1970. In the 1960s, these rates of increase clustered between 2.9 and 3.5% annually in the three sectors (Gregory, 1986: 32). The changes for the 1970s are given in Table 3.8. These data, which are from a different source, are not completely comparable with previous years (Gregory, 1986: 33). The figures show almost no growth in agricultural employment, and much higher growth rates in the secondary and tertiary sectors.

A breakdown of women's participation in the labour force by sector indicates that in 1970, 12% of all women in the labour force were in agriculture, 20% in manufacturing, 15% in trade and 50.5% in services (CEPAL, 1983: 170). In comparison with 1960, women's participation in agriculture had decreased from 32.7% to 12%, while increasing substantially in manufacturing (from 12.4 to 20.1%), and remaining almost constant in trade (14.5 to 15.0%). In services, participation increased substantially (from 38.1 to 50.5%) (9). The 1980 census figures at the sectoral level are not considered, because of the very large percentage of 'unaccounted for' activities of working women (30% of all women in the labour force).

For the purpose of this study, it is useful to further examine the extent and concentration of women's employment in manufacturing. There is evidence from case studies that women find work predominantly in the labour-intensive agro-industries (food-processing, textiles/clothing, leather and shoes), which can be considered extensions of their household tasks (Alonso, 1984: 223; Arizpe, 1981). In the northern border zone, women work extensively in the export-processing industrial plants, in which clothing and electronics industries predominate.

Almost no evidence is available on the types of labour relations in which men and women work. For women, there is a certain amount of information from case studies covering 'casual' types of labour relations. Arizpe (1977: 33) indicates a wide range of activities and differences among women of various social groups. She distinguishes between 'middle-class women with certain educational and social advantages' and working-class and 'marginal' women with no schooling (10). The former accept part-time activities which can be done at home or in other women's homes, and consist of an extension of tasks usually exchanged among family and friends for free. Working-class and marginal women primarily carry out their tasks in other women's homes or in the street. These activities involve personal services and trade, but most especially domestic services. Finally, prostitution is a possiblity for all women.

Beneria and Roldan indicate that in Mexico City women doing domestic outwork for industries occur in a wide range of industries - toymaking, plastics, electronics, and garments (1987: 22-23). Alonso, studying a neighbourhood on the outskirts of Mexico city, shows that the extent of women 'petty commodity producers' in the garment industry is also extensive (1983: 169-170).

## 3.3. Comparisons

In this section, the similarities and differences in the socio-economic structures of Mexico and India are compared. Where relevant and available, a further comparison is made from the perspective of all industrializing Third World countries, based on the results of the study by Kirkpatrick, Lee and Nixson (1984). Once again, industrial policy, industrial structures, and employment trends are the main topics.

India is a third larger in area, has a larger population and higher population density than Mexico. It belongs to the category of low-income countries, while Mexico is in the upper middle-income category. This is reflected in per capita GDP, and in the differences in rate of growth of GDP. However, in the comparison made by Kirkpatrick et al. among industrializing countries, both countries come under the sub-category of large industrializing countries as opposed to small countries with different factor endowments (Kirkpatrick et al., 1984: ch.2).

The contributions of the three economic sectors to gross national product differ. In 1985 agriculture still contributed almost a third to gross domestic product in India, whereas in Mexico this had shrunk to 11%. The contribution of industrial production in the two countries is comparable: 27% in India and 35% in Mexico. The service sector contributes slightly more than half the gross domestic product in Mexico, and 41% in India in 1985 (World Bank, 1987: 206-7). More important, however, is that both countries belong to the small group of Third World countries with the largest share of manufacturing value added in gross domestic product. The four top scorers include Brazil, Argentina, Mexico and India (Kirkpatrick et al., 1984: 15). This suggests that although the role of the other sectors may differ, the industrial sectors show a certain comparability.

Industrial policy

When industrial policy is compared, it can be seen that until very recently both countries have given prime importance to the policy of import substitution. Both have made use of licensing, differential tariffs and price controls in the large-scale private sector as instruments.

In both countries the government has developed a mixed economy (public sector and private) in which it plays an active role. This extends not only to state ownership of infrastructure, but also of basic industrial goods, capital goods, and a number of basic consumer goods. The share of public enterprises in manufacturing investment in India and Mexico is comparable (61% and 65%, respectively in the mid-seventies) (Kirkpatrick et al., 1984: 154).

Both India and Mexico are in the category of Third World countries in which foreign direct investment is somewhat concentrated (Kirkpatrick et al., 1984: 93). In both countries, foreign-owned enterprises accounted for similar levels of annual sales in the manufacturing sector in the late seventies (Kirkpatrick et al., 1984: 53). Further, government pressure in both has also led to extensive linkages between the local economy and import-substituting transnational companies (Kirkpatrick et al., 1984: 102).

Actual trends in industrial production show that growth rates in industry have been less for India than for Mexico during the last twenty-five years. However, they show similar trends. During the first period of import sustitution until the late sixties, growth rates in industrial production were substantially higher than in the later period. The role of exports in both countries has been relatively unimportant; only in recent years have both countries stimulated exports. The contribution of exports to GDP is now higher for Mexico than for India (16% versus 6% resp. in 1985) (World Bank, 1987: 210-11).

There is a clear difference in the size of the external debt of the two countries. Mexico's long-term debt in 1985 was almost three times as high as that of India (89.0 versus 29.7 million US$). In both countries 75% of the debt is public and publicly guaranteed (World Bank, 1987: 232-3). However, Mexico is mainly in debt to private banks and India to international development banks with more concessionary terms. In 1985, the debt service in India of external public debt was 9.3 of exports of goods and services, and in Mexico 37.0%.

Industrial structure

The industrial structure of the two countries shows similarities and differences. The relative importance of the industrial sector compared to agriculture and services, is much greater in Mexico than in India. In Mexico, it contributed 35% to the gross national product and in India some 27%.

The factory sector in both countries is very small in terms of number of establishments, whereas small-scale and artisanal production is extensive - with household production representing almost fifty percent of production units. The portion of employment provided by small-scale and artisanal production in the seventies is unclear. In Mexico figures ranging from 23% to 75% of manufacturing employment in units with fewer than five workers are given, and in India 78% of total manufacturing employment was in such small units around 1970 (Kirkpatrick et al., 1984:

51). However, the role of small-scale and artisanal production units is larger in some industries than others. Textiles, food-processing, garments and leather show ,a predominance of small units, whereas steel, paper, and iron do not.

Production structure does not go hand in hand with ownership structure. There is a certain amount of evidence in both Mexico and India on the prevalence of relationships between large and small-scale firms/establishments. This indicates that several types of relationships occur: a) ownership of small units by large firms and b) subcontracting production to small firms from large ones. Case studies in both countries are indicative that these types of relationships occur in a wider range of industries than previously considered likely.

Industrial production in both countries shows a strong regional concentration. This has remained the case in India as well as Mexico for the last forty years, despite efforts by the governments to diversify to additional regions. Both governments have set up special export zones to stimulate more employment. This has resulted in zones where special products are made, and where to date most of the employment created has gone to particular groups of women.

Employment

Trends in employment in general, and for women in particular, are difficult to trace with any reasonable degree of accuracy. In both countries, there are grave problems with the concept 'economically active' as operationalized in the censuses. Changes in definitions between censuses have not made matters easier. The official censuses in both countries show similar overall rates of labour force participation: slightly more than one-third of the total population. Given the low levels of income in India, and the skewed distribution of income in Mexico, these figures are not quite believable. The official level of women's economic participation is quite similar in both countries: around one-fifth of all women in 1981. The large percentage of women with 'unaccounted for activities' in the latest Mexican and Indian censuses suggests that substantial problems exist in counting economic activities, particularly for women.

Labour legislation in both countries is fairly extensive for people working in officially registered employment. This includes not only minimum wages, but also social security benefits. For women, extra safeguards have been built in for those working in such officially registered employment: these concern maternity leave, health insurance, and child care. However, in practice existing legislation is usually not applied. Only efforts by trade unions in each industry (and in large-scale units) lead to partial enforcement for members.

The structure of employment in both India and Mexico has changed substantially since the early sixties. There has been a shift in employment out of agriculture towards industry and services, such that this last category now absorbs a larger percentage of the working population than industry. However, India stills lags far behind Mexico in this process. The role of the agricultural sector in employment is still much larger for India than for Mexico (63% and 26% respectively of the working population), and the percentage of the labour force in manufacturing and services substantially smaller.

These differences are also reflected in the distribution of women employed in the three sectors. Although the difficulties in census data do not permit stringent comparisons (concerning women's employment the 1970 census in Mexico is much less restrictive than the 1980 one, while in

India it is more so), one can make certain general statements. In India, women still work predominantly in agriculture, whereas in Mexico this sector offers employment to the smallest group of women. In Mexico, women predominate in the service sector, whereas in India this sector absorbs only a small percentage of women.

The sector in which the percentage of women employees is most similar for Mexico and India is manufacturing. Unfortunately, other material is not readily available in order to place this comparison in a larger context. Within the manufacturing sector, there are similarities between the two countries in the way in which women tend to be concentrated in the labour-intensive, older industries. These include food-processing, textiles and garments, and leather industries.

Information on employment by size of firm in small-scale and artisanal production is fairly extensive for India, but quite limited in the case of Mexico. The same applies to the different types of labour relations under which people work. Both limitations are even more evident in tracing the extent of women's employment. Therefore, no conclusions are drawn here on this aspect of industrial employment.

In conclusion, it can be said that there are substantial overall differences between India and Mexico. However, comparisons of certain aspects of industrial policy, the contribution of industry to national development, and employment trends show a number of similarities.

Footnotes to Chapter 3.

(1) See Footnote 4 for a complete definition of the concept of 'small-scale sector' and changes in this concept over time.

(2) Factories are legally defined as production units with more than fifty workers and using power, or more than one hundred workers without power.

(3) Basic goods include salt, fertilisers and heavy chemicals, cement, basic metals, electricity and mining. Intermediate goods include textile spinning, wood and cork, newsprint, leather and fur, rubber products other than footwear, petroleum products, bolts, nuts, nails, etc.,and storage batteries. Capital goods include hand tools and small tools, electical and non-electrical equipment, and transport equipment. Consumer goods include durables such as furniture and fixtures, office and household equipment, cars, and other methods of transport, and non-durables such as food, beverages, tobacco, footwear, garments, drugs, and lamps.

(4) The manner in which the small-scale sector has been defined has changed over the years, and various sub-divisions have been introduced as well. This has been the result of on the one hand, pressures from entrepreneurs in small units who want to remain within the small-scale sector, and on the other hand, the necessity for using simple criteria for implementing policy measures for this type of unit (Tyabji, 1984: 1425).
To begin with, the small scale sector was defined as units with fewer than 50 workers and using power, or 100 workers without power (the criterion of the Industrial Act in defining factories). In addition, fixed capital investment was not to exceed 5 lakh Rupees. Political pressure led to the withdrawal of the employment criterion in 1960, and the upward revision on fixed investment to 10 lakh Rupees. By 1980, the limit of fixed investment had risen to 20 lakh Rupees. In 1977, under the Janata government, the concept of the 'tiny' sector was introduced, where units had an investment in plant and machinery of less than 1 lakh Rupees, and were located in towns with less than 50,000 inhabitants (1971 Census). However, by 1980, when Mrs. Gandhi came back into power, the limit was raised to 2 lakh Rupees (Tyabji, 1984: 1426).

(5) The bias implicit in this sample is towards overrepresentation of the better organized units, as these are the units which have all received credit from the banks.

(6) Currently, the groups officially represented in the PRI are: the peasant block, the worker block and the popular block (which consists of professionals, middle-level administrators and entrepreneurs).

(7) Subcontracting for export is more common in the northern region of Mexico.

(8) At the national level, the census is the main source of information on the labour force. Since 1973 a quarterly labour force survey, the Encuesta continua sobre ocupacion (ECSO), has existed, although with varying coverage. As of mid-1983, a new survey instrument with coverage limited to urban areas was being tested as a replacement for ECSO (Gregory, 1986: 18-19). Each census has had its own problems. The 1950 census was one of the more reliable. The 1960 census was distorted by processing errors that gave rise to an inflated measure of labour. The adjustments made by Altimir have led to the figures for 1960 used in the tables. The 1970 census undercounted the male labour force, and adjustments were made by Gregory (1986: 19). In the 1980 census changes in the definition of the labour force and deficiencies in tabulation make numbers incomparable and of doubtful value. Estimations based on the 1979 ECSO survey have been used by Gregory to estimate the labour force in 1980.

(9) A summary calculation of the maximum number of people who could possibly be working in the informal labour sector can be made. Excluding the 19.5 million people under 15 as non-working children (although even this assumption is known not to be true), the potentially economically active population stands at 47.4 million people. Only 47% of this group are officially registered as employed. Therefore, a maximum of 25.3 million people could work in the informal labour sector. A similar calculation can be made separately for women. Out of a potential 24.2 million women over 15, only 6.1 million are officially employed. This leaves 17.4 million women who could possibly be working in the informal labour sector.

(10) These trends occur in other Latin American countries as well (see CEPAL, 1983: 168).

(11) Marginal is a term often used to indicate a class in Latin America, originally thought to exist outside the modern capitalist sector, and to lack any integration with it. More recently, it has been used to define those people who work simultaneously in capitalist and subsistence production. The difference with wage workers is that a) they do not receive money wages, b) they do not receive social security coverage, and c) relations with employers are not contractual (Portes, 1985: 15). This categorization corresponds with a large part of the informal sector workers in India, working as 'employees', 'single workers' or 'family workers'.

## CHAPTER 4. WOMEN'S LABOUR IN THE INDIAN TEXTILE INDUSTRY

This chapter presents the results of the Indian case study on women's labour in the textile industry in Coimbatore, Tamil Nadu. This case study covers the three main research questions addressed here. The first is what types of production structures exist in the textile industry, and how are they related? The second concerns the current division of labour between men and women in the different types of production units, and how this is changing. The third concerns the impact of economic activities on the extent of women's social autonomy within the household.

The study is based on field work carried out by the author in South India over fourteen months. Because such data collection has a large number of methodological implications, these will be discussed at the outset.

### 4.1. Methodological note

In carrying out this study several decisions had to be taken concerning methodology.

The first was to limit the study to one industrial sector in India. The textile industry was chosen, for several reasons. Several different types of production units co-exist in this sector. The handloom sector - which is part of the 'unorganized' sector, consisting of cloth production (weaving) by family units on handlooms - is traditionally one of India's leading industries, providing extensive employment and a major source of exports. During the colonial period, this sector came to be dominated by English trading companies, which monopolized the foreign markets. In the nineteenth and twentieth centuries, it has had increasing competition from the mills, and encountered great difficulties before the Second World War. After Independence, it became the symbol for all decentralized industries, and received a great deal of attention from the government.

The handloom sector co-exists with large-scale textile mills set up continuously since the middle of the nineteenth century. Production in the mills was initially concentrated in Bombay, and influenced by English investments and personnel. However, Indian capital and management soon took over, and the mills spread to Ahmedabad, and in the south to Madras, Madurai and Coimbatore. Two types of mills exist: the spinning mills which spin the yarn used to make cloth, and the composite mills, which carry out both spinning and weaving. The latter predominate in the north, and the former in the south.

The powerloom sector is a recent development, consisting of cloth production in small workshops. Although the looms used are similar to those in the mills, the size of the units is much smaller, and they are not classified as 'factories'. This means that such production falls neither under the Factories Act nor under any labour legislation. Recently, this sector has grown enormously in those areas in which the mills are also concentrated (Maharashtra, Tamil Nadu). It is apparent from the study presented here that the main reason for this increase is the sector's high profitability, and that the composite mills are increasingly making use of sub-contracting.

The textile industry as a whole was the first sector in which the government, after Independence, carried out its policy of protecting the decentralized sector from the formal sector, and was the sector for which

this policy was developed most extensively. The mill sector has been limited in its expansion, and taxed to benefit the handloom sector particularly. The latter was stimulated by reserving several types of cloth production to it, and by setting up a cooperative structure in the sector. The government's attitude towards the powerloom sector has been ambivalent, changing according to whether it was considered a competitor of the mill sector or the handloom sector (Estimates Committee, 1978) (1). A more detailed description of policies is given in Section 4.2.

The textile industry as a whole is important in terms of employment for women. Of all women working in manufacturing, textiles (ISIC Code 321) employs the second largest group. Only food processing (311-312) employs more women (see Chapter 3, Section 2.4.).

Within the textile industry, it is more difficult to trace women's employment, particularly in the decentralized sector. In the mills, women make up 4% of the total labour force - some 55,000 women (SIMA, 1980). In Coimbatore, 33% of all local powerloom workers are women; and each worker operates one powerloom. Given the 1984 estimate of 800,000 powerlooms in India, my estimate is that 264,000 women work in this sector at the national level. Because the number of powerlooms is still underestimated, however, the actual number is probably much larger. In the handloom sector, 47% of all local workers are women, with one woman assisting per handloom. The total employment of women on handlooms nationally is most likely around 1,510,000. The national estimate of 3,020,000 looms given by the ICMF (1984) is probably too high by a factor two (see calculations given in 4.2.). This indicates that employment of women in the whole textile industry is some 1,829,000 women.

A second decision taken was to do extensive field work, rather than make exclusive use of secondary sources. This was related to the almost complete lack of information on the way women are employed in the handloom and powerloom sectors. Several case studies on the decentralized sector (mainly handlooms) were available, but these studies concentrate on technical and financial aspects of production (SITRA, 1978; Center for Studies in Decentralized Industries, 1980), and make little or no mention of women.

A final choice was that of locality: it was necessary to choose a fairly limited area in which to carry out field work in order to be able to cover it within one year. It was thought that the region should have a concentration of textile production units representing all three types of production organization, with a fair number of women employed in them. In addition, the local dispersion of units should be fairly concentrated in order to minimize transportation (and time) problems (see Appendix A.1. for figures on distribution).

Taking into account the concentration of both production and women, Coimbatore seemed a good area to choose. After visiting Bombay and Coimbatore, it became clear that the spread of production units in the Bombay area covered a large geographical area, due to the size of the city itself and the distance of villages with concentrations of handloom and powerloom units from the city. In Coimbatore, most mills were concentrated inside a small area of five to ten kilometers, with decentralized units in villages within a twenty kilometer range.

Data collection has been carried out by various means.

First of all, use has been made of secondary materials. For the textile mills, the main sources were the management organizations (ICMF, SIMA) or

research organizations partially funded by management organizations (SITRA, BRTA, ATIRA). These reports, as well as annual reports from individual companies, give extensive information on the cost structure of the mills in most areas. Conspicuous by its absence in such sources, however, is information on the workers. Therefore, most information concerning workers was collected by direct interviewing. For the handloom industry, most secondary material comes from older government reports (All-India Handloom Board, 1959; Census, 1961 Special Report on Madras; Mehta Committee Report, 1964). The material is available due to the special attention received by this sector after Independence, when the cooperative structure was being set up; it is obvious that more recent reports (Estimates Committee Report, 1978) are based mainly on the earlier reports. These reports give extensive information on production, as well as some indication of the characteristics of the people working in this sector, allowing a more historical perspective. For the powerloom industry, almost no information at all is available from such sources, aside from a few newspaper articles (Economic Times, 1982: April 8,20) and two short Economic and Political Weekly (EPW) articles (June 14-21, 1980; July 26, 1980). It would be very instructive to carry out a large-scale survey of the powerloom sector, considering its enormous growth and potential for employing women.

Secondly, I felt the need to participate as directly as possible in Indian women's lives, in order to understand their motivations, wishes and problems at a more elementary level. It was not feasible to live among one of the three types of women studied; also this would have implied an emphasis on one group over others. It was possible, however, to live in a working women's hostel in Coimbatore, where some hundred women lived who worked in various jobs in the city. This afforded a good opportunity to acquire a more extensive view of Indian working women outside the textile industry, and for greater direct participation than through interviewing.

Discussions with women in the hostel were particularly enlightening regarding the general ideas prevalent in Indian society. It became obvious that having a paying job plays a dominant role in these women's lives, even to the extent of leaving their husbands and children in order to have a job. Although this applied particularly to government employees, it was clear that all women felt a great sense of responsibility to provide for their families. Secondly, the importance of marriage became clear. The search for a husband, the demands made by his family, his character and that of their future marriage relationship were almost daily topics of discussion among the unmarried women. Thirdly, the ideology of women's relationships with men was revealed in the strict regulations applied by the hostel secretary, the watch kept on male friendships and visits, and the discussions concerning 'good' and 'bad' women which showed that the submission ideal is still strong.

In the main part of the study, different types of interviews were used. An extensive interview schedule covering all the variables previously mentioned in detail was used as a basis, and a short schedule designed to check the pattern of responses within a larger group was derived from the more extensive schedule. Obviously, in a Third World setting, strictly controlled interviewing circumstances and questioning are not possible if one is to get answers. Thus a certain amount of flexibility was needed in eliciting answers.

In the mill sector, sufficient information was available from SIMA records to allow a reliable sample of mills and women workers to be drawn. The mills clustered in and around Coimbatore were ranked by the percentage of women workers they employed, and a sample of thirty mills was chosen ($p< .01$). Quota sampling among women workers was done by age and a 4% sample chosen (N=207). For both management and women workers, the extensive interview schedule was used.

In the powerloom and handloom sectors, information on dispersion of units and number of working women was not available at the taluk level (a small administrative unit below the district level), so that no samples could be drawn directly. As an alternative, three villages with concentrations of production units were chosen for each sector with the help of officials from the Department of Handlooms, and ten owners from each village completed the extensive interview schedule (N=30 each for both handloom and powerloom production units). In the same manner, ten women workers from each village were chosen and an extensive interview conducted with them (N=30 each for both handloom and powerloom workers). The results of these interviews were analyzed in order to derive a pattern, which could be checked on a larger scale. This was done by interviewing all other production units and workers in the same three villages, using a short schedule. The number of people covered were 160 units and 74 women in the powerloom sector, 824 units and 424 women in the handloom sector, and 27 units and 207 women in the mill sector.

It is difficult to say anything about the reliability of the larger samples of units and women workers within the context of Coimbatore taluk, as there is no information on the population as a whole. However, comparisons of the small and large samples of women and production units show no great differences. Thus the results hold true at least for the villages covered (Appendix B.2.).

The extensive interviews among both women and managers were conducted by me, with the help of a personal assistant who worked on the project for the entire period. The respondents were approached through a flexible system of introductions from 'reliable' people. The necessity for this became evident immediately in Delhi, where little information was given without introduction from a friend. Therefore, key respondents among management as well as workers gave the initial introductions. Afterwards, networks of contacts developed in several directions (unions, mills, women's friends); careful attention was paid to using several avenues in order to minimize the potential bias from using one source. Given the small differences between the small and large samples, the degree of bias appears to have been fairly small.

Data has been analyzed using SPSS. The analysis concerning the division of labour between men and women in the workplace is based on simple correlation matrices. Analysis of the social autonomy profile of women workers and correlations with other employment and household variables is based on multivariate analysis.

## 4.2. Forms of production in the textile industry

In this section the background of the textile industry in India is examined in regard to its development in the past thirty years and the influence of government policies. This provides a context within which the gender division of labour can be discussed in a more historical manner, and provides an answer to the question of what developments can be expected in the future in this industry. This question will be answered by considering the following aspects of the industry:

1. the way in which government policies have shaped the growth of the different sectors within the textile industry ( section 4.2.1.);
2. the production unit structure in each sector, with particular regard to the cost structure (section 4.2.2.);
3. the way in which the three sectors influence each other (section 4.2.3.).

Government policies are considered separately because the textile industry is the clearest example of the Indian government's attempt to create a mixed economy (composed of private as well as public sectors) as an alternative to more conventional development strategies. Within the textile industry, the policy of providing employment to millions of people by stimulating a labour-intensive decentralized sector and protecting it from the competition of factory production has been carried out to a much greater extent than in other sectors.

However, such government policies are limited by the internal structure of the production units themselves and particularly by the degree to which they actually produce a profit or pay living wages to those who work in them. Therefore, the way in which production takes place and the related costs and rewards are examined. In addition, the relations between groups involved in production are taken into consideration because of the effect they have on changes in production and cost structures.

The extent to which the three sectors influence each other's growth and internal characteristics is examined to determine the manner in which each can be expected to develop. In particular, the role of the 'unorganized' sector versus that of factory production will be considered - will it be possible in the long run for the 'unorganized' sector to exist in competition with factory production?

### 4.2.1.Government policies

The first independent Indian government stated several goals for its policies. Although sometimes conflicting, these were to:

a. create more employment per volume of output;
b. economize on capital investment;
c. promote decentralization of industrial activity;
d. raise income levels of weavers by raising productivity (Narayan, 1979).

In the textile industry, it was first of all decided to limit the expansion of capacity in the factory sector. This was done by freezing the existing loom capacity of the mills. Mills were allowed to purchase new looms only to replace old ones. The exception to this rule has been the installation of looms producing solely for export in existing composite mills (SIMA, 1971). In 1958, the mills had installed on average almost seven hundred looms each. This number has scarcely increased since that

time (up to 1979). The number of spindles allowed per mill without a license was limited to 20,000 in 1956. In 1972 the limit was expanded to 25,000, and, since 1977, up to 50,000 spindles. Although it has been possible to apply for licenses to further increase capacity, the general tendency has been instead to expand the number of spinning mills small enough to require no license (see Table 4.1.A.).

Secondly, the 1956 Textile Control Orders reserved certain types of cloth for production by the 'unorganized' sector. Three types were reserved for the handloom sector alone, and eight for the powerloom plus handloom sectors. At that time, few distinctions were made between the two sectors, both being considered to have to compete with the mill sector. Recently the handloom lobby has complained that the powerloom sector actually competes with the handloom sector rather than the mill sector (Estimates Committee, 1978). This has resulted in the reservation of ten types of cloth exclusively for the handloom sector, and eight others for both 'unorganized' sectors.

Thirdly, efforts were made to improve the infrastructure of the handloom sector in order to stimulate production. The most important method was the creation of a cooperative structure, designed to take over the role of the 'master weavers'. These people had the handloom weavers in their power via their dual role as traders and financiers. They furnished the inputs and sold the products, giving the weaver only a small conversion wage and pocketing the profits themselves. In addition, they lent the weavers money at high interest rates, so that a permanent debt bondage was created. Cooperatives were also to provide raw materials to the weavers and market their products, but would give them a higher percentage of the price received for the cloth.

From the mid-sixties on, the implementation of these policies was left mainly to the state governments, whose interest in carrying them out varied. In Tamil Nadu the handloom sector has traditionally employed a fair number of people - 14% of all handlooms in India in 1978 (Estimates Committee, 1978) - and has therefore attracted the attention of the state government. Tamil Nadu has been the most active state in enforcing the reservation orders, judging from the fact that it had the highest number of convictions of offenders in 1978: 296 convictions (Estimates Committee, 1978). The state has also been fairly successful in organizing cooperatives. It has received the bulk of the credit extended by the Reserve Bank of India - 66% - (Estimates Committee, 1978), due to the fact that it has generally conformed to the norms of production and turnover laid down by the Bank for extending such credit.

Government policies toward the powerloom sector have been somewhat uneven. In the fifties a distinction was made between small powerloom units (with less than four looms) which were treated on a par with handloom units, and the larger units, which were subject to restrictions, with the intent to strictly controlling growth. This control has never been effectively implemented, so that the number of powerlooms has been able to grow with little restraint, and has done so.

Government policies have affected growth of the textile industry (2) in different ways. In the mill sector, capacity has indeed been curtailed by government licensing policies. The number of looms installed has remained virtually stagnant since 1951, as can be seen in Table 4.1.A. The number of spinning mills has grown, however, from 103 mills in 1951 to 674 in 1985. Growth occurred mainly in the first two decades ( 6.4 and 6.9% average yearly growth, respectively, during those periods); in the last

Table 4.1.A. Average capacity in the mill sector: 1951-1985

| | no.of mills | | | av.no.of spindles/ mill | | av.no. of looms/mill (composite) |
|---|---|---|---|---|---|---|
| | spin | comp. | tot. | spin | comp. | looms |
| 1951 | 103 | 275 | 378 | 17,864 | 33,309 | 709 |
| 1961 | 192 | 287 | 479 | 15,885 | 36,968 | 693 |
| 1971 | 373 | 291 | 664 | 15,201 | 41,958 | 714 |
| 1981 | 400 | 291 | 691 | 21,175 | 43,333 | 714 |
| 1985 | 674 | 281 | 955 | 17,775 | 44,413 | 747 |

Table 4.1.B. Growth of yarn production in the mill sector (in million kgs.)

| | cotton | 100% man-made yarn | blended yarn | total |
|---|---|---|---|---|
| 1951 | 591 | | | |
| 1961 | 862 | | | |
| 1971 | 881 | 65 | 34 | 980 |
| 1972 | 972 | 60 | 28 | 1060 |
| 1973 | 988 | 62 | 31 | 1091 |
| 1974 | 1007 | 60 | 25 | 1092 |
| 1975 | 989 | 54 | 40 | 1083 |
| 1976 | 1006 | 65 | 76 | 1147 |
| 1977 | 846 | 87 | 189 | 1122 |
| 1978 | 912 | 103 | 225 | 1240 |
| 1979 | 952 | 99 | 187 | 1238 |
| 1980 | 1058 | 87 | 141 | 1286 |
| 1981 | 1015 | 93 | 175 | 1283 |
| 1982 x | 958 | 83 | 134 | 1175 |
| 1983 | 1092 | 73 | 144 | 1309 |

x excluding Bombay mills

Source: ICMF, Handbook of Statistics on the Cotton Textile Industry,1979;1986;
ICMF, Report for the year 1980-81, 1981.

decade growth in the number of spinning mills has slowed to less than 1% yearly on average. In the eighties, the growth rate has again increased. The size of the spinning mills has hardly changed over the last three decades; from the table it can be seen that size remained constant until 1985. Composite mills have scarcely expanded their spinning capacity over the last thirty years - less than 1% a year on average over the entire period.

Yarn production has grown slowly in the last three decades. Average yearly growth was 3.9% in 1951-1961, declined to .22% in the following ten years, and since then has picked up to an average of 2%. Although cotton yarn is the still the major product of the mill sector (83% of total production in 1983), there has been a gradual shift towards man-made and blended yarn. Recent figures for the latter two categories show a high growth rate for blended yarn (315% from 1971-1980), and a lesser growth

rate for 100% man-made yarn (34% in the same period). However, growth in non-cotton yarn seems related to a short period (1975-1978) in which government liberalized imports of man-made fibres. Current high levels of duties and excises have curtailed growth in this type of yarn.

The production of cloth in the textile industry as a whole over the last thirty years has slightly more than doubled; in 1951 production stood at 4740 million meters, in 1984 at 12,636 million meters. However, a number of changes have occurred in the type of cloth produced and in the relative importance of the different sectors (see Appendix A.2. and A.3.).

In the mill sector, total production of cloth stagnated until 1980, and since that time has actually decreased to a lower level than in 1951. However, the percentage of non-cotton cloth produced has increased enormously. In 1971 96% of all cloth produced was cotton, whereas in 1980 this was 82% (ICMF, 1981). The change was caused mainly by increased production of blended cloth, which in 1984 formed 23% of total production in the mill sector. Cloth of 100% man-made fibres has doubled in the period 1971-1980, but still was less than 1% of total production of this sector in 1984. Surprisingly, cotton cloth production has decreased not only as a percentage of total production in the mill sector, but also absolutely. As it has been steadily decreasing by 2% yearly since 1956, and since 1976 even much faster (see Appendix A.2.), this cannot be due to a change in product.

In the 'unorganized' sector as a whole, production has grown over the last thirty years, but the growth rate has gradually slowed. In the early fifties, the growth rate was on average 10 % per year, which slowed in the late fifties to 7 %. In the early sixties this slowed down to 5% yearly, and to 2% in the late sixties. In the seventies production has grown by 5% yearly. In the early eighties, growth has been 6% or more yearly (see Table A.3. in Appendix A.). The importance of non-cotton cloth was fairly steady in the seventies. In 1971 76% of all cloth produced was cotton;, in 1980 this was still 72%. In 1984, it has gone down to 64%. 100% man-made fabrics made up 23% of total production in 1984. Blended cloth has grown at a much faster rate (20 % per year on average) than 100% man-made cloth, but only made up 13% of total production in 1984.

In accordance with government policy, the mill sector has decreased cloth production over the last three decades. Whereas in 1951 79% of total cloth production occurred in the mill sector, this has decreased in 1984 to no more than 26% of total production. For the decentralized sector as a whole, figures are as reliable as those for the mill sector, as they are derived from calculations based on total production of yarn. It is very difficult, however, to calculate the separate contributions of the handloom and powerloom sectors, because calculations for production in both sectors are done indirectly. Until 1964 production in the decentralized sector was calculated by assuming that 90% of the yarn sold by the mills was consumed by the decentralized sector, and that the handloom sector used 76% of that total (Chandrasekhar, 1982). This meant that one never really knew how relative growth in the two parts of the decentralized sector was changing. The Ashok Mehta committee (1964) raised the share of the powerloom sector from 15 to 22% of decentralized sector yarn consumption, but did not change the method of calculation.

More recently, calculations have been based on the form in which the yarn was sold: hank yarn was assumed to be used for the handloom sector,

and cone yarn for the powerloom sector. On this assumption the government ruled that mills should produce a fixed amount of their yarn in hank form, as a form of protection for the handloom sector. Cone yarn is more profitable, however, and it is likely that the figures produced by the mills themselves underestimate the amount of cone yarn produced. In addition, the assumption that only handlooms use hank yarn, also turns out not to be correct; in Coimbatore powerlooms also used this form of yarn to produce shirting and dhoties.

Given the fact that these methods of calculating production in handloom and powerloom sectors are highly inaccurate, one can question whether calculations would better be based on the number of looms in the respective sectors, assuming a fixed number of meters produced per day on a loom. There are two problems with such a calculation: first, in the handloom sector there are a large number of 'idle' looms, i.e. looms on which no cloth is produced at all, or which are producing well below their capacity. Secondly, the number of powerlooms is not known with any accuracy at all, due to the fact that the regulatory system concerning powerloom units is only now starting to be implemented, so that the number of 'authorized' powerlooms lags a long way behind the actual number.

With these caveats, a short table has been compiled to show changes in production of cotton cloth within the three sectors of the textile industry (Table 4.2.). This serves only to show the direction of change; the figures have little absolute value. It is clear from this table that production in the powerloom sector grew much more quickly than in the handloom sector in the fifties and sixties, and slowed in the seventies. The handloom sector, on the other hand, grew in the fifties, stagnated in the sixties, and is now decreasing. The decreasing trend must in actual fact be much larger than is indicated in the table, when the overestimation of production in the handloom sector and the underestimation in the powerloom sector is considered.

Changes in production have had some implications for the level of employment. In the mill sector a distinction must be made between the number of workers 'on roll' and the number of workers actually employed on any particular day. The difference between the two figures, which is related to the system of hiring 'badli's' (casual workers) to fill in the gaps left by high absenteeism, increased from 14% in 1961 to 24% in 1971, after which it remained at that level (3).

Table 4.2. Production of cotton cloth in the three sectors of the textile industry (in million meters)

| | mill | | handloom | | powerloom | | total |
|---|---|---|---|---|---|---|---|
| | abs. | growth | abs. | growth | abs. | growth | abs. |
| 1951 | 3727 | | 795 | | 218 | | 4740 |
| 1961 | 4701 | 0.3 | 1832 | 8.7 | 540 | 9.5 | 7073 |
| 1971 | 3957 | - 1.7 | 2218 | 1.9 | 1474 | 10.6 | 7356 |
| 1975 | 4032 | - 0.5 | 2131 | - 1.0 | 2009 | 8.0 | 8034 |

Note. Average growth rates per year are calculated for ten-year periods.

Sources: Commerce, January 31, 1981.
ICMF, Handbook on Statistics for the Cotton Textile Industry, 1980.
Report of Taskforce on Powerloom, quoted in Cauvery, 1980.

Table 4.3. Growth of employment in the mill sector

| | on roll (M+W) | actually employed (M + W) | % difference (on roll and actually employed) | | M | W |
|---|---|---|---|---|---|---|
| 1955 1) | | 671,000 | | | 621,333 | 49,667 |
| 1956 | | 758,242 | | | 708,198 | 50,044 |
| 1957 | | 806,000 | | | 739,064 | 66,936 |
| 1958 | | 762,000 | | | 710,174 | 51,826 |
| 1959 | | 757,000 | | | 707,804 | 49,196 |
| 1960 | | 760,000 | | | 713,343 | 47,415 |
| 1961 | 918,000 | 793,000 | 14 | | 738,810 | 47,190 |
| 1962 | 929,000 | 798,000 | 15 | | | |
| 1963 | 938,000 | 804,000 | 14 | | | |
| 1964 | 970,000 | 831,000 | 14 | | | |
| 1965 | 967,000 | 822,000 | 15 | | | |
| 1966 | 931,000 | 788,000 | 15 | | | |
| 1967 | 928,000 | 789,000 | 15 | | | |
| 1968 | 908,000 | 760,000 | 16 | | | |
| 1969 | 899,000 | 740,000 | 18 | | | |
| 1970 | 927,000 | 749,000 | 19 | | | |
| 1971 | 941,000 | 719,000 | 24 | | | |
| 1972 | 972,000 | 762,000 | 22 | | 926,000 | 42,000 |
| 1973 | 1020,000 | 784,000 | 23 | | 979,000 | 42,000 |
| 1974 | 1023,000 | 787,000 | 23 | | 984,000 | 43,000 |
| 1975 | 1027,000 | 779,000 | 24 | | 988,000 | 42,000 |
| 1976 | 1030,000 | 760,000 | 26 | | 989,000 | 41,000 |
| 1977 | 1061,000 | 817,000 | 23 | | 1020,000 | 41,000 |
| 1978 | 1100,000 | 842,000 | 23 | | 1056,000 | 41,000 |
| 1979 | 1148,000 | 862,000 | 25 | | 1088,000 | 60,000 |
| 1980 | 1150,000 | 875,000 | 24 | | 1095,000 | 55,000 |
| 1981 2) | 1200,000 | 880,000 | 27 | | | |
| 1982 2) | 1200,000 | 723,000 | 40 | 3) | | |
| 1983 2) | 1206,000 | 799,000 | 34 | | | |

Notes.
1. Figures given for men and women workers for 1955-1961 are for 'actually employed' workers: from 1972-1980 figures are for workers 'on roll'.
2. These figures include general staff and badlis.
3. The high percentage difference between workers on roll and actually employed in 1982 and 1983 is due to the Bombay textile strike.

Sources: ICMF, Handbook of Statistics on the Cotton Textile Industry, 1981;1986.
V.V.Giri, Labour Problems in Indian Industry, 1972.
SIMA, Indian Cotton Textile Industry, 1979, 1980.

Total employment in the mill sector has scarcely grown over the last twenty years (see Table 4.3.). However, opposite trends have been present for a long time in the recruitment of men and women. The absolute number of women workers is decreasing, whereas the absolute number of male workers is increasing. In addition, the percentage of women workers in the total labour force is decreasing. In 1955, among workers actually employed, women workers were 7.4% of the total labour force. By 1961, this had decreased to 6.0%. In 1972, women workers were 4.3% of the total labour force on roll. In 1980, they were 4.7%. It seems most likely that the downward trend will continue. Unfortunately, more recent figures are not readily available.

In the 'unorganized' sector, figures on employment are also calculated indirectly. They are usually derived from the number of looms estimated to exist, with a fixed conversion rate. For the handloom sector, one can say that one loom provides work for two people; in the powerloom sector, one person per loom has been taken as average. As the number of looms in the powerloom sector has been underestimated, actual employment must be higher than that given here. Inversely, the number of handlooms has most likely been overestimated, so that actual employment in this sector is smaller. Thus, one arrives at the following figures at the national level: in the powerloom sector, employment has grown from 145,000 in 1964 to 551,000 in 1982; this can be considered a minimum estimate. In the handloom sector, the number of people employed in 1961 is estimated at three million people, and in 1978 at eight million; these figures can be considered maximum estimates.

Because these figures are so uncertain, census figures from Tamil Nadu are explored in order to gain a more accurate idea of the growth in employment in the decentralized sector. Using Tamil Nadu as a baseline has the advantage that it represents a large part of the handloom sector, and that information is available from the Survey of the Handloom Industry in 1959 (All India Handloom Board) and more recent figures collected by the Directorate of Statistics in Madras (Bharathan, 1983: 33). The census figures pose a major problem for tracing women's employment. The 1961 and 1971 Census definitions of 'worker' differed, such that many more women were classified as non-workers in 1971 than in 1961 (Bharathan, 1983: 15). Therefore, only 1961 will be used as a basis for comparison (see Table 4.4.).

In production units in Coimbatore, women comprise 50% of the workforce per production unit in the handloom sector (including unpaid family labour). In order to calculate an alternative estimate of the total number of workers in each sector for the census years, these percentages have been used as conversion rates. The number of looms in Tamil Nadu is compared with this alternative method of determining employment, in order to calculate the accuracy of the national figures of numbers of looms and employment. The actual number of looms employed in production is around 60% of the number of looms estimated to exist, based on a comparison of employment with number of looms. Translating this to the number of handlooms estimated to exist nationally (3.02 million in 1984), the actual number of looms would come to 1.78 million, and the number of people employed to 4.45 million.

Table 4.4. Estimation of employment and numbers of handlooms in Tamil Nadu

| | 1961 |
|---|---|
| total employment | 465,961 |
| men employed | 297,674 |
| women employed | 168,287 |
| est. number of looms | 508,372 |

Source: Bharathan, 1983, based on 1961 Census.

A similar calculation was made for 1978. In that year, estimates of the number of handlooms came to two million. This was compared with the number of handlooms calculated from production of handloom cloth. In 1978 Tamil Nadu produced 27% of the national handloom cloth production. Given the assumption that there is no great difference in the number of meters produced per day by a handloom elsewhere, the number of handlooms in Tamil Nadu was therefore assumed to be 27% of the national total. Given the estimate of 556,000 handlooms in 1978, the number of handlooms nationally should thus be 2.06 million handlooms. This is a similar result to that derived from employment figures in 1978, and leads one to consider the national estimate of 4.5 million people (in 1978) employed in the handloom sector to be more realistic than eight million. Similarly, an estimate for 1984 of 4.45 million people would be more likely.

The same type of calculation for the powerloom sector in Tamil Nadu leads to the conclusion that employment in this sector is grossly underestimated (see Table 4.5.). When the conversion rate is used, the number of people employed in the sector is much smaller than the estimated number of looms. Coupled with the fact that even the number of looms must be underestimated, it is clear that the employment figures given for men are not accurate. The discrepancy has decreased in the 1971 census, but still exists. An additional problem is that it is not possible to check employment in this sector in Tamil Nadu by comparing production in the state with that at the national level, because statistics are not collected.

Table 4.5. Estimation of employment and numbers of powerlooms in Tamil Nadu

| | men employed 1) | total employment | given number of looms 1) | calculated no. of looms |
|---|---|---|---|---|
| 1961 | 2,714 | 3,500 | ± 7,000 | 3,500 |
| 1971 | 20,289 | 26,984 | ± 20,000 | 26,984 |

Note. The figures marked 1) are Census figures; the other columns are calculations.

Source: Census 1961, 1971.

4.2.2. Production unit structure

The question of production unit structure is examined mainly at the local level in Coimbatore, because of the lack of information available on the internal structure of production units in the decentralized sector at a more general level. This type of information is available for the mill sector, and will be mentioned from time to time. However, before going to on to discuss these matters, a short description of Coimbatore will be given.

Coimbatore is the second-largest industrial town in Tamil Nadu, and dominates the region in which it is situated. Its population was around 900,000 in 1981, as the small villages which surround it closely have recently been brought into the Corporation area. It lies in the middle of a fertile cotton and rice growing region, and is an important junction on the railroad. The combination of these factors have given an impetus to the industrialization that has taken place in the city, and in particular to the growth of the textile mills. The textile sector is still the most important sector in the town, but the engineering industry is growing rapidly, with large-scale development of textile machinery by Textool and Lakshmi Machine Works, and a host of small workshops doing repairs and producing spare parts (Harriss, 1982: 948).

The caste composition of the population has been traced by Beck (1979: 139) on the basis of data collected by malaria officers in 1972. This gives a fairly up-to-date idea of the distribution of various castes in the city and their hereditary occupations. The largest single group is that of the Chettiars (traders, moneylenders, and shopkeepers), who make up 15% of all households. The next largest groups are the Gounders (peasant farmers) and Harijans who each form about 12% of the total number of households. Third in importance is the Naidu community of big entrepreneurs, which makes up 11% of the total population.

Mill sector

The Coimbatore textile mills are dominated by a small group of Kammavar Naidus, who began in previous generations as landowners, growing cotton, later going into cotton trading and finally at the turn of the century beginning yarn and cloth production. The city and its surrounding area was well-placed for this type of industry, because of the extensive cotton production nearby, and the cheap electricity available. Although the first mills were established in town, later mills extended along the roads leading out of Coimbatore and its surrounding small villages, where the industrialists either owned land or could buy it cheaply.

The Naidus control 73% of all mills (Ramaswamy, 1977: 14) followed by the Chettiars (21%), with a small number of mills owned by Gounders. The Naidus also have the largest concentration of ownership within only a few families. In the past they set up chains of textile mills (Murphy, 1981: 26-27), which are now being inherited and divided among the younger generation , who intermarry within their caste and at the same economic level, thereby not reducing the concentration of capital. They have also translated their economic power into political leverage, as they become M.P.'s and leaders of SIMA and ICMF.

The first mills were composite mills, but during the 1960's mostly spinning mills were set up, and these still form the majority today (84%).

Capital is usually furnished by members of one family, and a few friends; with this capital a private limited mill is set up (currently 26% of all sample mills). Even those who have gone public limited, however, show a high concentration of their shares in the hands of the ten largest shareholders (usually more than 75% of all shares). These shareholders usually belong to one family, who also control the management of the mill.

There have been several boom periods in the Coimbatore textile mills; the first took place between the First and Second World Wars, when the profits made in the Bombay mills inspired Coimbatore Naidus to invest in this industry (Murphy, 1981: 25). The second took place after the Second World War - the mid-sixties show a sudden increase in the number of southern mills set up (SIMA, 1979). The profits in the Coimbatore mills were very high initially. Reports by the government of Madras suggest that mills earned several times their paid-up capital in a few years, and that the commission earned by the managing agent in several mills at that time was more than the total costs of salaries paid to workers and staff (Ramaswamy, 1977: 13). This situation seems to have continued until the end of the sixties, when a number of mills (mainly older composite mills) ran into financial trouble. Reports concerning the 'sick' mills suggest that management preferred to hollow out the mills financially and sell them to the government, rather than take measures to reorganize them. This process culminated in the take over by the National Textile Corporation of 104 mills all over India in 1974. Ten of the mills involved are located in Coimbatore, and include the oldest town mills.

Since the mid-sixties profits in the textile industry have decreased in comparison to the preceding period, and at the national level have remained lower than in other industries. However, profits in the Coimbatore region have remained higher than for the industry as a whole (see Table 4.9.). This is most likely due to the predominance of spinning mills in the area, which have a higher profitability than composite mills (SITRA, 1978). This situation has led to changes in the way production is organized, as managements attempt to rationalize production. It has also led to changes in the type of product. A SITRA study (1976) calculates that in the south machine productivity explains 42% variability in profit, and type of product, 28%.

First, the type of product has changed. The mills in Coimbatore mainly produce cotton yarn for the decentralized sector. In the mill sample, production has not grown much in the last ten years; average production has increased by no more than 2% per year. Production has also shown rather wide fluctuations, due to problems such as power cuts (with a 20% average decrease in production), and industry-wide strikes lasting several months (SITRA, 1981). The mills produce hank yarn for the handloom sector, and cone yarn for the powerloom sector. In 1972 the production of hank yarn exceeded that of cone yarn in amount (hank yarn was 64% of total production). However, since that time production of cone yarn has grown rapidly (by 123% in 1972-1980), whereas production of hank yarn has grown by only 16% in the same period (4). In 1979, 61% of total production in Coimbatore district consisted of cone yarn, and 39% of hank yarn (SIMA, 1980).

The reason for this change in the type of production lies in the higher profitability of cone yarn in comparison to hank yarn. The higher the count, the higher the price of cone yarn is in comparison to hank yarn

(for 20's, the difference is 1%, for 40's is 18%, and for 60's 27%). The prices for both products have increased at the same rates per count over the last ten years (5), so that this factor cannot explain the change in production trends. Exports of yarn from Coimbatore mills are negligible - less than 1% of total production in the district.

Secondly, mills have tried to increase profitability by cutting production costs. The main production cost (as percentage of net sales) is that of the raw materials. In 1964 raw materials still accounted for 56% of the value of net sales, but by 1976 this had increased to 67% for Coimbatore spinning mills (SITRA, 1976, 1978). For the mills sampled, price increases in costs of raw material had risen by 137% from 1971 to 1981. Although raw materials make up such a large part of total costs, it is difficult for mills to gain more control over them. The cotton is bought both through private and public traders' associations, over which the mills have little control. The government has tried to stabilize prices and supply by introducing support prices for cotton and monopoly public associations, as well as limiting the stock of cotton allowed per mill,but it does not appear that this policy has had much effect. However little can be done about these costs, more can be done about labour and machinery costs.

On average in the mill sample the cost of labour has gone up by 20% from 1971 to 1981, by far the largest part of the cost increase. However, it is not such a large part of total costs; in 1964 it was 18% of net sales value, decreasing to 15% in 1974. Labour costs have gone up rapidly in the last ten years, because of the large increase in the consumer price index from which the monthly dearness allowance is calculated. As the dearness allowance now constitutes the major part of a monthly salary, these are costs the mill can control only indirectly. The salaries in Coimbatore have reached higher levels than in Bombay and Ahmedabad in the last ten years. In the sixties, wages grew by 6.6% per year on average in Tamil Nadu, and in the seventies by 11.6% on average (ICMF, SIMA, 1979, 1980). A second element that has contributed to higher wage costs is the large yearly bonus workers receive in the SIMA mills; these often rise above the legal limit of 20% and have reached 32% when mills made high profits.

Because labour has become so expensive, mill management has increased machine and labour productivity. Renewing machinery as a means of increasing speed of production is fairly recent in Coimbatore, and is related to the scheme of soft loans set up by the IDBI in 1976, which has gradually gained in popularity. Previously, mill managements preferred other methods for increasing labour and machine productivity, as replacing machinery led to relatively high cost. Such methods included higher workloads within each eight hours for workers, and the increasing use of three shifts. Higher workloads for workers are strongly contested by the unions when they negotiate workload agreements with individual mills. This is quite important to the workers, as their basic wages are calculated in accord with a certain amount of production - a hidden piece rate.

Use of the third shift increased rapidly in the seventies. Increasingly, workers are being employed in three shifts, instead of two. Figures from 1972 to 1980 show that the average number of workers employed in the third shift in spinning (+28%) as well as weaving and preparatory work (+40%) has increased enormously, both absolutely and in relation to the other two shifts. This has immediate consequences for the use of

women's labour: women are not allowed to work in the second and third shifts under the regulations of the Factories Act, and thus it is difficult to keep them on in a rotation system.

The results were compared by department, since the spinning department and the reeling and winding departments are the most labour-intensive areas. (In the mills sampled, 41% of the total workers are located on average in the spinning department and 14% in the reeling department, and 12% in winding.) In the spinning department the modernization of machinery has contributed the most heavily to higher productivity (57%), while increase in workloads has contributed 42% (SITRA, 1979). In the reeling and winding departments modernization of machinery has hardly played a role.In reeling increases in productivity due to higher workloads have been very small - for the past twenty years an average yearly increase of .65%. In the cone winding department, on the contrary, productivity as a result of higher workloads has increased on average by 2% per year over the last twenty years (SITRA, 1981: 22). This means that in order to keep up with the productivity increase in the spinning department, the cone winding department must work more shifts.

As most women work in the latter two departments, these changes have had a large negative impact on them. Whereas in the mills sampled the number of men working has increased by 14% between 1971 and 1980, the number of women decreased by 9%. This is obviously due more to the use of three shifts rather than to the other protection women have, such as maternity leave. The latter has been paid by the government since the early seventies.

In the composite mills, relative costs are slightly different. The weavers earn the highest salaries of all mill workers, so that labour costs make up a larger part of net sales value: in 1974 these were 24%, and in 1976, 22% of net sales value (SITRA, 1978). The higher costs, and the protection workers receive under the Factories Act, has led these mills to discontinue weaving on the premises to a certain extent, and to subcontract it to the powerloom sector.

Unions have been able to play a role of some importance in this process of rationalization. In Coimbatore, the unions have been formed more around party than community lines (Murphy, 1981: 199) and can be divided into socialist, communist, and employers's unions (6).The original unions have practically all split up due to factionalism among their leaders, but currently they work together on industry-wide issues in order to be able to tackle the strong mill owners' organization SIMA.

From the available figures, it seems that the employers' union is currently the largest, with a membership of 14,400. However, it not always possible to accept such figures at face value, because unions derive their bargaining strength from the number of members they have. Women generally form between 10-15% of the total membership, corresponding to their numbers in the industry as a whole in Coimbatore. Most women are members of HMS, one of the oldest unions (Murphy, 1981: 196 ff.). The unions in Coimbatore are more decentralized than is usual in India, due to the dispersion of the mills, and the necessity of organizing workers in each mill.

The unions are most concerned with issues of wage levels, workloads, and job reservation. There has been a constant struggle between SIMA and the unions about these issues during the past ten years. At the end of the sixties, the government set up a Wage Board for the textile industry,

which recommended equalizing the dearness allowance nationally, and linking it to the consumer price index; it also linked wages to productivity, and limited employment reduction to 'attrition'. Implementation lagged, and a regional strike occurred in 1972 concerning wages, dearness allowance, and the take-over of sick mills by the government. Only the last was actually resolved at the time; other demands were referred to various committees. Among the demands was also the question of heirs' inheritance of mill jobs, and the continuation of employment for the same number of women workers as at that time. In 1974 workers struck again, and a five-year settlement was concluded, which fulfilled demands concerning the dearness allowance and higher wages, heirs and women. In 1978 an industry-wide strike broke out again concerning bonus payments, for which a three-year settlement was reached, bringing bonus levels up to the highest in India. However, yearly strikes have been necessary to achieve actual payment of bonuses.

The mills constantly try to renege on the settlements with the unions. For instance, where heirs of the workers were given priority in recruitment, several mills tried to force a court case on the issue, knowing that it is in fact an 'illegal' demand. Unions have until now evaded going to court. In another instance, the mills suggested paying the bonus in two installments, well knowing that workers buy clothes with the bonus at the time of Diwali.

Although the unions have thus far been fairly successful in raising the level of income, mills attempt to undermine this by rationalization. The workload agreements reflect this in the increasing amount of production expected during a standard 28 day month. Unfortunately, few firm figures can be given for this process, as the way in which workloads are calculated has changed over time. This made it impossible to calculate the changes between 1956 and 1970. From 1970 to 1981 the average increase over all functions was 28% (calculated from SIMA, 1979, and individual workload agreements in current use at the mills).

Powerloom sector

The powerloom sector in and around Coimbatore is seen as one of the fastest-growing sectors of industry. The census figures from 1961 and 1971 show that in that period a 40% yearly increase in employment occurred in Coimbatore district. This applied equally to employment for men and women. The figures given in the following paragraphs are taken from the small sample of production units covered around Coimbatore.

The producers come from several different castes: the largest number of people are Mudaliars (61%), traditionally peasant farmers. The second largest group is the Devanga Chettiars, traditionally handloom weavers (18%). This can be seen very clearly from the workers' fathers' occupations; 27% of them were handloom weavers. The third largest group is that of the Gounders.

The occupational background of the producers themselves is also striking, as 43% were mill weavers before setting up their own production unit. This was often done by using the pension fund and gratuity to invest in powerlooms: 45% of all producers used savings as their source of investment capital. Selling jewelry and borrowing from families was also a widely used technique (25%), while bank and coop loans accounted for 23% of all sources of capital.

The average amount of capital needed to set up a powerloom unit differs according to the year in which it was set up, and the number and type of powerlooms bought. In the sixties, an average 2,350 Rs. was paid per machine (with one shuttle). In the seventies, the price of such a machine had risen to 4,000 Rs. per machine. For a powerloom with four shuttles, the price is 10,000 Rs.. As the average size of a unit lies between 1 and 4 looms, the capital needed to set up a unit varies between 4,000 - 16,000 Rs. However, many producers have bought their looms secondhand or in parts from small foundries in the rural areas of the district, saving some twenty-five percent on their expenditure.

The majority of the units covered were set up before 1971 (57%) and consist of 1 and 4 powerlooms. A fairly large number of them belong to the one powerloom cooperative set up in the sixties as part of the program to transform handlooms into powerlooms (which later was abandoned) in Coimbatore taluk; the rest are in the private sector. The usual type of cloth produced is grey gada, unbleached cloth, which is sold in this form and processed by units located elsewhere in Tamil Nadu or the Bombay area. 70% of all production units make this type of cloth. A second popular product is lungis and dhoties (27% of all units), and a new product is colored shirting (33%). The latter is important, because it is used as raw material for the export clothing industry, centered in Delhi, Bombay and Calcutta.

Prices for these products vary widely. Little is paid for unbleached cloth (.35 - .50 Rs./m). Dhoties and lungis are sold for .60 - .85 Rs./m and for shirting 1.00 - 3.00 Rs./m is paid on average. These prices are the conversion prices that producers receive from the traders providing the raw materials and buying back the cloth. The producers who can afford to buy the raw materials themselves and sell on the open market can get prices approximately two thirds higher than those given here.

The level of net sales reflects this difference between production units. The average is around 5,200 Rs. per month, but there is great variation between units. The majority of producers working for conversion wages pay their workers 77% of the price per meter they receive from the merchant. Other costs borne by the producer include 13% (of the value of net sales) for energy costs; for the few who buy their own raw materials, this requires 38% of the sales value.

For those who work for conversion wages, therefore, the livelihood derived from this production is around 50% of total sales. The great variations among units can be seen in the difference in income: 43% earn less than 1,000 Rs. (250 fl.) per month, 17% between 1,000-2,000 Rs. (250-500 fl.), and 30% earn more than 3,000 Rs. (750 fl.) per month. Most producers do not buy raw materials themselves because of the large amount of working capital one must permanently invest in this 'cost'. For the five producers actually bearing these costs, an average of 7,700 Rs. per month is reserved to buy raw materials.

There are various people who give yarn on credit to powerloom producers. Some composite mills subcontract their weaving to the powerloom producers, thereby avoiding labour legislation and fluctuations in prices and production, since the producers then bear the risk. Secondly, the largest handloom merchants (four, in Coimbatore) hand out production to powerloom producers as well as the handloom weavers. The reason for this lies mainly in the way orders for export shirting are worded: they almost always require delivery by a certain date, so that the merchant must be

sure of completing total production. Powerloom producers as well as handloom weavers are mobilized in order to complete production. Finally, there are also numerous smaller merchants/traders who buy the grey gada most powerloom owners produce, and sell it in local markets.

For powerloom producers, energy forms a large part of total costs (13%). The government has recently raised the prices, so that producers expect this cost to go up rapidly in the near future. A second problem is the frequent power cuts in the summer months, when the water reservoirs feeding the power stations are almost empty. Generators are not an alternative for these small producers, however, as they cost too much to buy and operate.

The producers also try to minimize labour costs by using family labour for several preparatory functions. This applies mainly to those who are members of the coop, and operate with minimum capital and working costs. Others make use of wage labour combined with family labour (33%), and half the producers use wage labour only. Wage labour is mainly used by producers in the private sector. Producers still have trouble finding sufficient numbers of labourers who will stay with them for some time, because of the strong competition from the factory sector, and machine workshops paying good wages as well. Most labourers stay with one production unit for less than one year, only long enough to learn the trade, and then go on to better-paying jobs. This means that the powerloom sector subsidizes training. Producers try to bind workers by giving them loans. Bonus is given to workers who stay with one unit longer than a year, although the level of bonus varies a great deal by function - weavers receive the most. Most powerloom units work two shifts of twelve hours each. Wage labourers are often hired only for the night shift, while family workers take the day shift. As no rules apply to this sector, women as well as men work in the night shift. The larger the unit, the more use is made of women's wage labour. When women are wage workers, men do not work either as wage labourers or as family workers. Alternatively, when women work as family workers this is seldom combined with wage work for women.

As yet there has been little trade union activity in the powerloom sector in Coimbatore taluk, in contrast to Erode and Tiruppur. Workers themselves say it is not yet necessary to organize, as there are more employment opportunities than number of workers. However, the CITU had attempted to organize workers in the largest powerloom unit in Coimbatore (48 looms) for higher wages, bonus, and permanent status. The employers fired the workers en masse, and hired new workers after several months. Producers are also only marginally organized. Their association takes action only when prices of yarn, energy of excise duties on powerlooms themselves are raised. It lobbies the state government, and attempts to inform its members of the changing situation. However, it includes several of the larger producers (i.e. with more than four looms), and only a small number of the producers with only one loom.

The marketing of the cloth is seldom in the hands of the producers, except when they invest in buying raw materials. This has led at various times to friction among producers and merchants. Although the cooperative must officially sell their products to the apex societies in Tamil Nadu, these buy up only a small proportion of total production, leaving the

coop to sell the rest to private merchants. Private producers depend totally on the merchants who sell their products. On the one hand, this leads to a relative degree of security, knowing one has a buyer; on the other hand, if the market is bad, the merchant will attempt to reduce the price paid for the cloth. The risks of production fluctuations are also borne by the producer. This is true especially in producing export shirting, for which orders are received only six months per year (January-June). In the latter half of the year, producers are again constrained to go back to producing traditional products.

Recapitulating, it is clear that the powerloom sector is still in an expanding phase, with its living income at a fairly high level of turnover in comparison to the mill sector. Producers attempt to keep labour costs down by using family labour, but even wage labour represents a relatively small cost, especially in view of the fact that workers are not protected by labour legislation.

Handloom sector

The handloom sector has grown fairly steadily in Coimbatore, according to estimates of the total numbers of looms made every ten years. However, comparing men's employment figures for 1961 and 1971, it would seem that the sector is stagnating. The estimated number of looms is twice as high as employment; this would indicate either an estimate which is too high, or a great deal of unused capacity. (The figures given in the following pages are based on the small sample of producers surveyed near Coimbatore.) Handloom weaving is a traditional occupation of the Devanga Chettiars in Tamil Nadu; 95% of the large sample of weavers were Chettiars, of whom 26% were Kannada speaking, and 68% were Telugu speaking. The remaining 5% of the producers were Mudaliars. Although both Telugu and Kannada speaking groups are Chettiars, they do not intermarry.

The handloom sector is fairly stratified in its production structure. An important role is played by the financer/trader, who is called a 'master weaver' in this sector. The majority of producers work for such a master weaver, and have done so for a long time (48% of all weavers in Madras, 40% of all weavers in the large sample in Coimbatore). In introducing the cooperative structure in this sector, the government has tried to take over the role of the master weaver; this has been partly successful in Tamil Nadu. At the state level, 28% of all weavers work in cooperatives; in Coimbatore this is around 39%. In Coimbatore taluk, however, the situation is relatively favorable to coops; the power of master weavers is stronger in other taluks in Coimbatore district. A small percentage of weavers work independently, i.e. buying their own raw materials and selling on the open market (15% at the state level, and 20% of the small sample in Coimbatore). In the large sample, this category makes up some 16% of the total. Finally, some producers do not own their looms, but work as wage labourers for others; at the state level, they are 9% of all weavers; in Coimbatore, this was 14% (see Table 4.6.).

Taking the figures for Tamil Nadu as a whole, it can be seen that not much has changed in the structure of the handloom sector since the end of the 1950's. The cooperatives' share has become somewhat larger, and that of the wage workers somewhat smaller. In conversations with master weavers in Coimbatore, the reasons given for diminishing growth of 'factories' hiring weavers are the protection 'employees' have, in principle, from

labour legislation, and the fact that they begin to mobilize when in larger groups. Most master weavers prefer to avoid such complications, either by renting out their looms for a fixed amount per month, or by scattering their production units in small clusters.

Table 4.6. Classification of weavers (in %)

| | 1959 | 1975 | 1976 | 1977 | 1978 | 1979 |
|---|---|---|---|---|---|---|
| Independent weavers | 14 | 10 | 15 | 15 | 14 | 15 |
| Working under master weavers | 54 | 47 | 50 | 47 | 47 | 48 |
| Working under Cooperative Societies | 13 | 23 | 28 | 31 | 29 | 28 |
| Factory weavers | 19 | 20 | 7 | 8 | 10 | 9 |
| TOTAL | 100 | 100 | 100 | 100 | 100 | 100 |

Sources: Director of Statistics, Tamil Nadu.
1959 figures, All-India Handloom Board, 1959.

The majority of the production units are small family units with one or two looms (76% of the large sample). Almost twenty percent have 3 or 4 looms, and only seven percent have more looms. This does not quite accurately reflect the ownership structure, since in one village a number of production units belonged to one owner. The amount of capital invested in the looms themselves is quite small, because 55% of the producers have actually inherited them. Instead of buying new looms, which still costs around 100 Rs. per loom at a minimum, they repair the parts which wear out quickly over and over again. 30% of the owners have either bought their looms themselves, or via the cooperative. 14% do not own a loom, but actually are employed as wage workers. The looms used in Coimbatore are pitlooms, i.e. the loom is built into the floor, rather than standing in its own framework. This is accompanied in this taluk by the use of 'dobbies', which make it possible to introduce a complicated pattern along the edges of the woven cloth.

In Coimbatore taluk there are currently two main products: cotton sarees of 100 count yarn (one of the finest counts available, with concomitant difficulty in weaving), which are produced by 45% of the production units, and pumper sarees, which are produced by 40% of all units. Pumper sarees consist of a synthetic yarn warp bought ready-made from a factory (saving the producer the cost of warping and joining), and a cotton weft; in addition, this type of saree sells better. Only 6% of all units in the taluk produce shirting for export clothing.

On average, producers sell 1,150 Rs. worth of cloth per month. However, one-third of all weavers sell less than half this amount per month, and only four sell more than twice this amount. The producers who sell to master weavers receive only conversion wages, just as powerloom producers do. The handloom merchants say that their profit on sarees is between 10 and 15% for cotton sarees, 20% for pumper sarees, and much more (unspecified) for shirting. However, the risk of rejection of orders is such that only the largest handloom merchants dare to invest the large amounts of working capital needed. One merchant has gone bankrupt from such a venture, but three others are slowly moving into the 'big league' and leaving other handloom merchants further behind.

Handloom merchants dominate production in this sector completely. They provide raw materials to the producers, and buy the finished products. They also provide loans for the producers, binding them closer to a particular merchant, since such loans (at 24% interest per annum), can seldom be repaid completely. The merchants are organized in an association, which includes some 30% of all merchants, but excludes the North Indian merchants, who form a separate group. Differentiation among merchants can be seen from the extent of their markets. The 17 large merchants (including the four largest) market goods throughout India and abroad. Forty-two medium-sized merchants market to specific areas within India, but outside of the Coimbatore region (mainly Bombay, Delhi or Calcutta), and twenty-three small ones sell wholesale to the larger merchants.

As stated, 80% of the producers do not pay for their raw materials, but receive them on credit from a merchant (42%) or coop (36%). However, the coop quite often has trouble delivering enough yarn to cover all of its members, so that producers have to turn to the private sector after all. This is one of the main factors limiting the growth of cooperatives, coupled with the fact that they may not take over the money-lending function of the merchant (in Tamil Nadu loans up to 500 Rs. per producer are possible). If producers were to pay for their yarn, it would cost approximately 42% of their total sales (7). This has been corroborated by figures from a Coimbatore cooperative, in which it was calculated that 39 - 42% of a product's unit sales value went towards yarn costs.

Labour costs are kept as low as possible in the handloom sector, because of the low returns. For all functions except warping and joining, family labour is used. Previously each family carried out these functions, but specialization has allowed producers to spend more time on the actual weaving. However, it has also led to price increases by the few families performing warping and joining, so that labour costs on average are 20% of total sales. This has stimulated production of pumper sarees, for which the cost of warping is borne by the merchant.

The living income producers make from their sales differs according to the number of looms they have. 36% of the weavers have a monthly income of less than 500 Rs.; 29% have an income between 501 and 1000 Rs., and 29% receive more. These figures are somewhat misleading however, as the percentage of income for paying off debts to the merchant could not be traced with any accuracy. In the survey carried out in Tamil Nadu in 1959 it was estimated that 76% of sales value was used to pay off loans to money lenders or master weavers (All-India Handloom Board, 1959). This would imply, for those paying labour costs, that only 5% of sales

value remains for living expenses (around 70 Rs. per month). This hardly seems possible given the current prices for goods. The women working as family workers generally estimated their family income at around 200 Rs. (50 Dfl. in 1982) per month. This answer seems more reliable, given current food prices and expenditure patterns within the family. This level of income implies that for those earning less than 500 Rs. per month, more than 40% of living income goes to paying off debts.

Marketing is seldom carried out by the producers themselves; only the largest handloom producers, who buy their own yarn, sell their products on the open market. The usual manner is to deliver the finished products to the merchant/trader from whom the raw materials have been received, and receive conversion wages in return. The majority of the private producers (66%) deliver their products to only one merchant, because of the bind they are in financially. The alternative marketing system is via the cooperative. In Tamil Nadu the apex societies officially will buy up to half of each cooperative's production. However, in practice this system functions slowly, especially since payment for the cloth sold comes back to the society only after three or four months. Local societies prefer to sell their products to private dealers, who pay immediately. In Coimbatore, dealers buy sarees in the months when rebates are given, and place orders directly with the society when exports shirting is ordered. In this manner, local societies are fairly successful in providing their members with continuous work.

In this sector, the relationship between merchants and producers is the one fraught with the most conflict. The merchants are organized in their own association, which lobbies at the state level concerning yarn prices and product marketing. Producers are organized in an association which allows male producers (women are specifically excluded) with up to twenty looms to become members. This association is active only when conflicts become widespread. Several years ago, producers attempted to be acknowledged as employees of the master weavers, with the privileges and protection afforded such groups (merchants often give yarn to 50-100 weavers). They stressed the fact that they received raw materials on credit, and conversion wages when returning the cloth. The Madras Labour Court judged the producers to be in the right, but later the state High Court overturned this judgement. Since then, merchants have taken care to informalize their relations with producers, giving them false bills of payment for the yarn they receive, so that that cannot be used as evidence. The handloom wage workers are currently not organized at all.

### 4.2.3. Influence among sectors

There are some important influences among the three sectors. First is the mills' subcontracting of weaving to the powerloom sector; the second is the handloom merchants subcontracting the work of making export shirting to the powerloom sector as well as the handloom sector. Producers, on the other hand, do not move easily between sectors.

The first can be clearly seen, when several actions of the mill sector are taken into account. First, four out of six composite mills in the Coimbatore sample have adopted powerloom units in and around Coimbatore. Although management of the mills are not specific about their activities concerning these powerlooms, it seems obvious that they must deliver yarn

to them and otherwise stimulate their production. Secondly, SIMA, the mill owners' association, is helping to set up powerloom centers to give powerloom producers access to technical advice on machinery and cloth production (SIMA Year Reports 1974, 1975). The first center was set up in 1975, and others are planned for the future. Thirdly, at the national level, it has been seen that production of cloth in the mill sector has stagnated over the last thirty years, and that the number of looms has remained practically the same. All these factors taken together show a clear indication of great interest by the mill sector (especially the composite mills) in subcontracting production to the decentralized sector, where wage levels for producers are lower than those for mill workers, and labour legislation does not apply.

The second trend can be traced only to the four largest handloom merchants in Coimbatore, who are currently producing export shirting. The merchants to whom the powerloom producers sold their products were the same people mentioned by handloom weavers who were producing export shirting. The reason for subcontracting to the powerloom sector is obvious, when one takes into account that one powerloom can produce 50 metres of cloth per shift, and a handloom weaver only five. Producing cloth with a given deadline can lead to the necessity to make use of all possibilities for production. However, handloom products are treated differently from machine-made products when being sold in world markets and the trend mentioned is illegal.

Producers do not move between sectors as easily. This applies especially to handloom producers, who do not - although this was hopefully stated in several Five-Year Plans - exchange their looms for powerlooms and advance to higher technology and productivity. The trend is rather in the other direction; mill workers are the ones who come back to being producers in the decentralized sector - as powerloom owners. Workers weaving in the powerloom sector aspire to working in the mill sector. According to producers this trend occurs to such an extent that they have difficulty finding sufficient numbers of weavers. Women workers, however, do not move easily between sectors.

## 4.3. Women's labour - caste, class and gender relations

In this section the degree to which a gender division of labour exists as a consequence of different types of production organization (wage-basis versus family-basis), and as a consequence of different phases within one type of production organization, is examined.

In the first section, we have seen how the mill sector, based on wage work and sharp worker/management relations in its expansion phase, was so profitable for employers that they were not interested in very efficient operations. More recently, there has been a strong trend towards rationalization, which also effects the way in which workers function. The question I wish to pose in this section is whether and to what degree rationalization has led to a division of labour more strongly based on gender than in the previous period.

I would expect such a division to be much stronger in the mill sector than in the powerloom sector, which, as we saw in the previous section, is still in its expansion phase. In the powerloom sector, therefore, I expect

to find a relatively weak division of labour between men and women. The handloom sector is based on family production, and thus has always had an explicit division of labour based on gender and age. Therefore I would expect to find a fairly sharp division of labour at present and to find that it has not changed much over time.

Recruitment

In the mill sector, workers have always been recruited on the basis of wage labour. This has been a labour market favoring employers, as the supply of workers has usually been larger than the demand. In the thirties, when the number of mills was expanding rapidly, employers could recruit sufficient numbers of people even while paying very low wages in comparison to other mill towns (Murphy, 1981: 32). Workers were recruited mainly from the rural areas immediately surrounding the mills. This was true especially for the mills built in the villages surrounding Coimbatore: the oldest mills in the center of the town recruited workers from areas further away as well as from the town center (Murphy, 1981: 27). The same pattern can still be observed today: three-quarters of the women working in the mills were born in Coimbatore taluk (city and immediate surroundings). An even greater majority of women live in the immediate area of the mill where they work. However, this situation did not always exist before the women went to work: often they will live with relatives near the mill.

Murphy also states that the majority of workers recruited were 'rural workers'. It is not quite clear what he means by rural workers - whether this includes only agricultural laborers working for wages and tenant farmers, or also small landowning farmers. Backgrounds of the women working in the mills currently are industrial as well as rural. Examining the occupations held by the previous generation, it is clear that about one-fifth of the present women workers are second-generation mill workers. In 21% of their families, the fathers held a mill job, and in 15% of the families the mother was a mill worker as well. About one-third of the women workers' families still had a rural occupation in the previous generation: of these 7% actually owned the land they farmed, and 16% were tenant farmers. But it has remained difficult to make a living off the land in the Coimbatore area, due to lack of irrigation water. Half of the mill workers' families who previously owned land sold it some years ago.

The occupations held by the previous generation of the women's husband's families are similar. A quarter of the men held jobs in farming, either as tenant farmers (14%) or landowning farmers. A smaller number were also mill workers (11%). The greatest difference is found in the number of men in the previous generation who worked as handloom weavers (11%). Other occupations held by the previous generations have mainly been non-agricultural, and include a variety of posts. In total, over three-quarters of the previous generation was already working in non-agricultural occupations. The majority worked as wage laborers just as in this generation.

The women workers' husbands are predominantly mill workers (40%), or have other wage occupations. Although 9% of the families still have a claim to land owned by the family as a whole, no one derives income from this source. Only a very few families keep cows; they derive some income from selling milk (5% of all families).

Thus, women workers in the mill sector and their families are almost completely dependent on the wage labour market. It does not seem likely

that the situation of male workers is very different in this respect - especially since almost half the families of the women mill workers have both men and women members working in the mills.

The women in the mill sector started work in the mills on average some twenty to thirty years ago. Half of them started at a very early age, as unmarried illiterate young women. The women say of that time '.. it was easy to get a job then. The factory manager would ask us our age, and we would say fifteen, and they would take us...'. In this manner some women actually started work while officially 'children', a deception in which parents and factory manager collaborated.

Recruitment was based mainly on caste relations. The jati (local caste) best represented among women mill workers is the Kammavar Naidus (44%). The next largest jati is that of the Gounders (16%). This corresponds to the general ownership structure of the mills, which are also dominated by Naidus. The majority (60%) of the women were recommended to the factory manager or the managing director on the basis of caste affiliation or of being neighbours. A number of women were taken on because they had relatives already working in the mills. Although most women decided for themselves to go to work (72%), quite often a male relative would go to the mill and apply for the job. Other women started working later due to the death of a husband or desertion. Currently some 17% of the women working in the mills are widows or have been deserted.

Recruitment procedures have changed drastically since these women started working. The mill management now prefers to recruit a better-educated, young, male labour force. Therefore, a series of requirements have been set up by management: workers must be educated up to the tenth standard, be 18-21 years old, and have a certain weight and height. Some mills also will not accept new women workers, only young men. The result is that women are excluded from recruitment in 34% of the mills currently (see Table 4.7.).

Table 4.7. Number of mills recruiting men and women workers in Coimbatore, 1980

| | no. of mills | |
|---|---|---|
| | abs. | % |
| only men | 9 | 34 |
| only women | | |
| both | 7 | 27 |
| none | 6 | 23 |
| don't know | 4 | 15 |
| | 25 | 100 |

Source: Mill sample.

The unions also have more say in recruitment now. Whereas previously the factory manager and the managing director selected new recruits, now unions may appoint 60% of the workers per mill, and the management the remaining 40%. The unions have fought for introduction of the 'heir'

system, in which sons and daughters of current mill workers are taken on to replace their parents. The importance of this system lies in the inter-generational security it gives to a family which depends on wage work, rather than on its 'own small business'. At least one child will have a job which pays well and be able to support the parents in their old age. Although management of the mills agreed to this principle in an agreement signed with the unions in 1972, a number of mills refuse to actually implement it. They state that this is in fact a reservation of jobs for a particular group of people, and therefore illegal under Indian law. Union leaders acknowledge this, and refuse to bring a case to court, fearing that a negative decision could weaken their position with all mills.

In only 13% of the women's families do the children also have a mill job. As one women said 'my husband and I both work in a mill... but neither of the mills will take my sons as heirs.. because they did not finish their schooling and now they are too old... How will they take care of us when we retire?' In summary, the recruitment system in the mill sector has become much more stringent than in the past, which has had an especially negative impact on potential women workers.

In the powerloom sector, workers are recruited as wage labour as well as through 'family conscription'. The number of employers hiring wage workers roughly equals that of employers using family labour; however, the units using wage labour tend to be larger than those using only family labour, so that we find a larger number of wage workers than family workers in this sector (67% of all workers). A larger percentage of men than women participate in the wage labour market. Among women the division is about equal; of men 77% are in the wage labour market. These two markets are not mutually exclusive. In fact, in units using women's labour, there is a combination of family and wage labour in 64% of all units, while 34% of all units use exclusively women's family labour.

The wage labour market is constrained more by supply than by demand. The number of production units is increasing rapidly (8), but the number of people willing to work is limited by the availability of other employment. This is most applicable to the weavers in the powerloom sector, who can find alternative employment in the mills with much higher pay scales. However, women working in other functions also state that they have no difficulty in finding work in this sector if their current job ends.

Most workers in this sector have been recruited recently. The majority of the women workers come from families engaged in non-agricultural pursuits. A large part of the previous generation were handloom weavers (37% of all families), or mill workers (17%). This is an interesting phenomenon, as it suggests that this sector currently absorbs labour otherwise working in the other two sectors (9).

Heads of households, who do not wish to or cannot pay for wage labour are the recruiters of family labour. This possibility is limited by the number of household members, and by the available alternative opportunities for employment. Excepting the son who will eventually take over as powerloom producer, as sons find jobs elsewhere they will be replaced by daughters. A married woman will often work on the powerloom, leaving the husband free to do other jobs; half the husbands work outside the house in paying jobs elsewhere. Thus, in the powerloom sector there is a dual basis on which labour is recruited - wage labour and family conscription. The two markets are not mutually exclusive, and the wage market is currently larger.

Primarily it is young married women with some education who work in this sector. This is more the result of primary education becoming more widespread than of stringent recruitment, as hiring procedures are presently very flexible in this sector. Producers state that they are completely indifferent to the gender of the person they employ, because they cannot get enough workers to operate the looms. The only necessary qualification is weaving experience; but not many women have this experience, and male weavers who have gained some experience tend to move on to mill jobs. This is corroborated by the women working as weavers: they have received individual training from their father or a neighbour in this function.

For the women workers, the constraints come more often from their own families. Parents prefer to know the employer, or even to have a male family member working in the same unit. One young woman said '..when this man (employer) stops producing my brother and I will go together to another unit... my father won't allow me to work alone'. This attitude is clearly demonstrated by the fact that more than half the women working as family workers were discouraged by their families from working outside at

a paying job (60%). The caste background is different than in the mills; the largest group is composed of Chettiars (40%), followed by Mudaliars (23%).

The handloom sector is predominantly a family labour market based on production in household units. Recruitment is based on ascriptive characteristics: age, gender and family relationships. In the usual combination the male family members weave, and the women and children do the preparatory work. The eldest male decides the division of labour, based on his authority as head of household. Recruitment for this occupation is hereditary: in almost all cases, the previous generation of the women's families were also handloom weavers (77%). In those cases where the women's family were not handloom weavers, and she married into a handloom family, she was taught the work.

The majority of women working in the handloom sector are 'family workers' (74%). The income from their work, as well as that of other family members goes to the male head of household. A portion is divided among the weavers (i.e. the older sons), but not among the other family members who contribute (women and children). One could say that they receive income indirectly through family consumption. However, in any family the consumption of income includes women, whether or not they do productive work in addition to their household work. Their productive work is not paid for in any way.

A small percentage of women work as wage labour in the handloom sector. These are mainly very old or very young women, who work for large-scale handloom units. In such large-scale units, family labour has to be supplemented by wage labour, since the number of looms is too large to be operated by family members alone.

There are few alternatives to using family labour in this sector. However, when the total income is too low to support the family, the family as a whole may change its occupation. Kasturi (1979) describes how handloom weaver families leave the south and migrate to Delhi in search of better jobs. She states that it is often the women who find jobs first as house servants, earning wages equal to half the previous monthly family income (100 Rs.).

Women of all ages work within the family context. The majority have been working since they were very young, and they work until physically too old to do so. Over half the women were taken out of school as a child, because they had to work together with other family members to produce an income. This applies to a slightly lesser degree for sons, as parents would like sons to find better-paying jobs outside. However, this is very difficult, so father and son often work together until the son starts his own family.

The majority of women working as family members refuse to take outside paying jobs (60%). They are encouraged in this attitude by other family members, who are also not in favor of outside jobs. In fact, of those doing wage work a larger percentage are widows and unmarried girls than of those doing family work. As women's wage work is very badly paid, it seems a desperate measure for those who have no family to help support them.

Two jatis predominate in this sector: the Telugu speaking Devanga Chettiars and the Kannada speaking Devanga Chettiars. Together they encompass 87% of all women working in this sector. As work in this sector

is based on family production, all members of a production-unit obviously belong to the same jati.

In this sector, it is difficult to speak of 'recruitment' as people are recruited on the basis of their kinship relations. Nevertheless, there is a difference between men and women: sons can eventually set up their own family handloom unit and control their wife's labour. Women can never have control over their own labour, or of that of others.

Functions

In the mills, production is divided into three main departments - preparation, spinning and finishing. The preparatory work is divided into breaking up the bales of cotton (mixing), removing foreign particles (blowing), and loosely roping the cotton (carding), which prepares it for stretching into yarn (spinning). Afterwards, the yarn is wound into cone yarn (cone winding), or into small bundles of hank yarn (reeling). This completes the process in the spinning mills; in composite mills the process continues with weaving the cloth.

The Coimbatore mills employ on average slightly more than 700 workers per unit. Moves to increase machine and labour productivity will lower this number over time. Women workers on average were 15% of the total work force per mill in 1981, compared to almost 19% in 1971. In 1961 they were about 19% of the total labour force in Coimbatore, so that it is clear that a decrease in women's participation rates started around 1971, and has continued. Before that time, the available evidence suggests the trend was fairly steady (10).

Women are concentrated in the finishing department. This has always been the case, although previously small numbers of women were also employed in other departments (cf. Morris, 1965). In the reeling department, each woman operates one machine, which consists of a long beam on which a number of yarn bundles are wound. Nowadays the machines are run on power, but the older women still remember the days when they were turned by hand. The work consists mainly of regulating the process: putting on new doffs of yarn to be reeled, and tying knots when the yarn breaks. The finished bundles are taken off the machines, twisted into shape, and carried to the maistry (foreman) to be weighed. The difficulty of the work varies with the thickness of the yarn (the count). The thinner the yarn, the more likely it is to break, and the more care one must take. The women often complain about the low quality of cotton used and how little care the spinners have taken while spinning to give the yarn an even quality. This makes it more difficult to complete the established workload, as breakages occur frequently.

In the winding department, in the majority of the mills (80%), men and women work together. Winding machines are power operated, and the work again consists of regulating the process: putting on new cones, taking full ones off, and tying knots when the yarn breaks. This department also has the problem of breakages, when the yarn is of irregular quality. Working conditions in these departments are fairly good, compared with those in other departments, insofar as lighting and noise are concerned. The women do not complain about these aspects, but do complain about the heat in the department (66%), and find the fact that they have to stand all day the most tiring aspect of their work (43% of all women). They would prefer shorter working hours, if given that possibility without loss of pay, in order to be able to get more rest at home.

Historically, skills training took place on the job. Functions were further subdivided and one learned by assisting the person primarily responsible for a particular operation. Now an apprentice system is also used, but it consists of letting young workers carry out the primary job, with a more experienced worker keeping an eye on them. Women workers have little access to apprenticeships. Thirteen mills have no women apprentices; seven have a certain percentage of women apprentices. Only three mills have no male apprentices; sixteen mills do have a certain number of male apprentices.

Women have access to work in only two out of the nineteen functions currently existing in most mills. Access to these two functions has remained fairly constant until recently, whereas other functions have increasingly been combined by the management in order to increase labour productivity: the agreement signed by the employers' organization SIMA in 1957 mentions sixty-three functions (excluding weaving). Women's access to work is now becoming smaller, because the mills are increasingly changing over from women to men in the cone winding department. This is being done, according to the management, because they want to work in three shifts, which women are not allowed to do under factory regulations. The segregation between men and women by function has been complete in most departments: only men work in eight out of ten departments. In one department, only women workers do reeling. The integrated situation in the winding department is, as discussed, a temporary phenomenon.

The technical process in the powerloom sector is somewhat different from that in the mill sector. It consists of cone winding in preparation for warping (fixing the yarn on the loom for weaving), strengthening the yarn for weaving (sizing), joining the warp thread to the previous warp on the loom (joining/drawing), pirn winding of the spools used while weaving, and braiding the yarns at right angles to each other to form cloth (weaving).

In the Coimbatore area, the part of the process carried out in the local powerloom units depends on the type of product made. In making grey gada and dhoties, the sized warp is bought from Tiruppur mills, and needs only to be joined to the loom to be ready for weaving. In producing (coloured) shirting, each warp has to be made separately.

There is greater scope for women's employment in this sector: the participation rate of women is almost 33%. They also make up a larger part of the work force per unit - between 21 and 50% of the employees. The exact distribution is given in the table below. Almost 10% of the units have 50% or more participation by women workers. This suggests that they are 'women-dominated'. This is the case when 1) the husband has another

job and leaves his wife and daughters to do powerloom weaving, or 2) a woman has been left a widow, and recruits her daughters' labour in the powerloom unit. This suggests that women are less segregated by particular functions in this sector than in the mill sector. Indeed, women are found working in all parts of the production process, but they are more predominant in some functions than in others.

Table 4.8. Women's participation rate by production unit in powerloom sector

| % of women workers | units | |
|---|---|---|
| | number | % |
| 0 - 10 | 4 | 2 |
| 11 - 20 | 22 | 14 |
| 21 - 30 | 47 | 29 |
| 31 - 40 | 37 | 23 |
| 41 - 50 | 36 | 23 |
| 51 - 60 | 6 | 4 |
| 61 - 70 | 5 | 3 |
| 71 - 80 | 2 | 1 |
| 81 - 90 | - | - |
| 91 - 100 | 1 | 1 |

(N = 160)

Source: Large survey of powerloom units.

The majority of women do cone and pirn winding (44%). They also make up 77% of the total number of people performing this work. Done mechanically, the work is done in the same room as the weaving. Where this is true, the women work in a deafening noise level. However, they can take an informal break from time to time. If the work is done by hand (cone winding), it is usually done outside on the veranda. This means better light, less noise, and possibly some conversation with neighbours, depending on the location of the workshop.

The second-largest number of women work in joining/drawing (31%). This is a spatially mobile occupation, involving going from workshop to workshop to join the new warp to the threads of the old one on the powerloom. Women do this work with a second person - usually a daughter or husband: one drawing the threads through the heald, the other assisting. One warp per day can be prepared in this manner. Women are also well-represented in this function, making up 67% of the total number of people who perform it.

In warping, the absolute number of women is very small; 13% of all women work here. In the Coimbatore region, warping is done locally when shirting is to be produced. It is done by specialized families, who own their own machinery, and do the work at home. This involves cone winding - often aided by children - and beaming (bundling yarn and winding it on a large beam). This work is done by hand, by the women. It is very quiet work. The beams are removed to the powerloom production units by the men. Women predominate in carrying out this function, making up 83% of all such workers.

The percentage of women weavers is also small - 13% of all women. The powerlooms are usually placed close together in one workshop, so that two looms can be worked by one person. The work consists mainly of checking the progress of the weaving for faults, and changing the spools in the

shuttle. This work is done in deafening noise, made by the clacking of the shuttles, and in rather poor light as well. This is the only function in which women are less than half the total number of workers - only 24%. The training needed to carry out the weaving is difficult for women to acquire; women who do weave have usually learned it by working in home production units.

From this description it is clear that segregation of women from men by function does not occur in the powerloom sector: we find men and women working in each function, although women predominate more in some functions than others. Again, there is no question of specialization of functions between men and women. Women have access to all functions, and take part in functions in which certain families specialize as well.

The division of the production process in the handloom sector resembles that in the powerloom sector. Yarn is wound on small cones with a diameter of ± 15 cm (cone winding) to prepare it for the warp, which is wound on a large wheel with a diameter of some three to four meters (warping). When the warp is removed, it is bathed in starch and stretched, after which the starch is brushed evenly over the stretched yarn (starching). The threads of the new warp are attached to those of the old one (threading), and the spools containing wound yarn (pirn winding) are passed between the stretched yarn of the warp (weaving). The main difference from the powerloom sector is the use of human rather than mechanical energy to work the machines.

Women make up almost half of the total number of people working in this sector (47%), as a consequence of families working as production units. In almost half of the production units 41-50% of all the people working in the unit are women.

Table 4.9. Women's participation rate by production unit in handloom sector

| % of women | units | | % of women | units | |
|---|---|---|---|---|---|
| | number | % | | number | % |
| 0 - 10 | 6 | 1 | 51 - 60 | 53 | 6.4 |
| 11 - 20 | 19 | 2.3 | 61 - 70 | 86 | 10.4 |
| 21 - 30 | 44 | 5.3 | 71 - 80 | 34 | 4.2 |
| 31 - 40 | 194 | 23.5 | 81 - 90 | 3 | 0.7 |
| 41 - 50 | 364 | 44.0 | 91 - 100 | 19 | 2.3 |
| | | | | (N=822) | |

Source: Large survey of handloom units.

The majority of the women work both at cone winding and pirn winding (72% of all women). This is done inside the house, or in the courtyard/veranda. Two types of machines are in use for pirn winding, one with one wheel, the other with two. The latter is much more efficient, because of its 'bicycle mechanism', which the women say reduces their work time to one-fourth of what it was. Unfortunately, most men consider it too expensive to buy the two-wheel winder (150 Rs.). The work is done on the

ground, with both arms held continually outstretched. This is quite tiring and necessitates frequent breaks. In addition, the thread is wound continually over the thumb, so that most women have permanent wounds on their thumbs and fingers. Women predominate in this function - they make up 97% of all people doing this work.

Warping is increasingly being done by families who specialize in this function. When done within the usual family unit, it is done once or twice a month; when done within a family which specializes, it is done on a continuous basis. The yarn is wound on a large wheel, several metres in diameter, which totally occupies one room, and is turned by hand. Usually several women work together on the wheel. After the yarn has been wound up, it is removed in bundles, each containing one warp. The work is done in a fairly dark room, with an electric light directly above the place where the women stand.

Starching is included in this part of the process, and is carried on outside, under the protection of palm leaf huts. The large starching brushes are moved from one end of the warp to the other by two people running on either side of the stretched warp. This is quite heavy work, which requires several hours to spread the starch evenly. Fifty-five per cent of the people performing warping and starching are women.

Joining is also done by specialized workers outside the family production unit. 10% of all women workers do this type of work. Two women, working together, knot some 3,600 threads together for each warp. Women said it took them five hours together to complete one warp. The fine count of yarn (100's) used in weaving make this work particularly difficult in Coimbatore. The number of threads per warp is higher, the individual threads finer and more difficult to see. This work is also done outside on the veranda, for maximum lighting. Women are 93% of all people doing this work.

The weaving is done in the main room of the house, where all the looms have been cemented into the floor. When there is little space, the looms are built over each other, and there is almost no extra space for family living. The weaver sits on a stone bench, weaving with the help of a rope which pulls the shuttle back and forth (fly-shuttle). This is an improvement over the throw shuttle, used some forty years ago, in which the weaver had to move the shuttle back and forth manually. The light is usually not very good, as the loom is inside. The more complicated the design is, the more this presents problems . Among weavers, women are only 25% of all workers.

The segregation of women is greater in the handloom than in the powerloom sector; they work almost exclusively in cone and pirn winding and joining, and are a smaller group percentage of the weavers. Thus, in three out of four functions, we find a high degree of segregation. The degree of specialization is not as high; women do have access to all functions, but in the case of weaving this occurs only if there are no male family members to perform these functions.

In conclusion, the degree of segregation by function is high in the handloom and mill sectors, and low in the powerloom sector, with the exception of the weaving function. Access to functions has been the most limited in the mill sector, and the least limited in the powerloom sector. Now, having looked at the gender division of labour by function, let us consider differences in workloads and wages for men and women.

Workloads and wages

In the mill sector, most functions are paid by piece rates: a certain amount of work is the 100% norm, for which there is a fixed basic wage. On top of this basic wage, a dearness allowance (DA) is paid, which is now linked to the consumer price index of the locality, and currently is the major part of the wage paid to mill workers. A third component is the bonus, a yearly payment made to workers varying with the profits of the mills.

Both wages and workloads vary widely among the mills within the Coimbatore area, and have been the subject of continuous debate between the unions and employers. Employers have tried to increase workloads with respect to wages, whereas unions have tried to keep them down. There have been several attempts to standardize workloads and wages in the past. In the fifties unions and SIMA reached an agreement for five years on functions, duties and basic wages, but this agreement was broken open several years later by the recommendations of the First Central Textile Wage Board set up by the government. Its recommendations - including a gradual increase in basic wage rates, and an effort to bring the wages in the south up to the standards in the north - were accepted only after a strike. In 1969 the Second Wage Board was set up, but its recommendations were not accepted by SIMA until after a strike in 1971. General strikes occurred again in 1972 and 1978 concerning workloads and basic wages. A comparison of functions for 1981 show that fluctuations in basic wages range from 50-60% above the average to 30% below average. However, this does not vary much between functions (see Appendix C.4. for the complete table), so there is no question of wages for women varying more widely than those of men.

Comparing the increases in basic wages in the 1956 and 1970 agreements (SIMA, 1979) with the current averages, it can be seen that wages rose in the first period by an estimated average of 7% per year, whereas in the second period (1970-1981) they rose on average by 2.5% per year (11). This does not give a complete picture, as the dearness allowance also increased over the same period. Total wage rates (basic wages and dearness allowance) for the lowest-paid workers in different localities (12) show that the DA has, in fact, grown more quickly than basic wages in the period 1970-1980. Total wages rates grew by an average of 9% per year, whereas basic wage rates grew only 2.5% per year. An attempt was made to compare wage increases with the increases in workload over the same period. From 1956 to 1970 it is very difficult to compare increases, as the entire system of calculating workloads changed in the intervening years. For the second period, it does not seem that on average the workload has changed much (13).

Wage differences between functions can also be examined. Women reelers are among the lowest-paid operatives, fourth on a scale of fifteen (14). Women winders in contrast are in the second highest-paid function. In the period 1970 to 1981, the percentage increase in basic wages for winders has been slightly above average (2.6% per year) but less than average for reelers (2% per year). Taking into consideration the trend in women's employment towards concentration in the reeling department, it can be said that women's wages on average are becoming lower than those of men.

The protection of women workers is quite extensive in the mill sector, but is said by the employers to be adversely affecting their employment of women. In particular, the fact that women cannot work the night shift makes employers reluctant to recruit new women workers. Illness benefits

for women give them the right to three months maternity leave on half pay, paid for by the state. Remarks by employers as to the crippling effect of this legislation therefore were applicable only during the five years between the passing of the Maternity Act and the passing of the ESI Act, which made government payments available.

In the powerloom sector, the powerloom owner is paid for his cloth by the meter. From this income, the coolie weaver and the workers doing the preparatory work are paid piece rates. The pirn winders are usually paid by the day, the warpers by the number of metres of warp they produce, and the joiners by the 1,000 ends. Of the amount the weavers/owners receive for the cloth from the traders, they give the coolie weavers one-third of the price per meter as wages. The next table indicates average piece rates and their variation, the daily rates (converted from the piece rates), and the rates per person.

Table 4.10. Average wage rates and conversions to daily rates in powerloom sector

| | average | minimum | maximum | daily rates | total |
|---|---|---|---|---|---|
| pirn winding | 4.46 | 2.00 | 10/day | 4.46 | 4.46 |
| warping | 0.35 | 0.35 | 0.35/mt | 35 | 17.50 |
| joining | 3.40 | 2.00 | 5.56/1000 ends | 12.24 | 12.24 |
| | | | | owner | coolie weaver |
| weaving grey cloth | 0.48 | 0.32 | 0.84/mt | 24 | 8 |
| dhoties | 4.50 | 2.00 | 12.00/3.5m | 51 | 17 |
| shirting | 3.24 | 1.25 | 7.00/mt | 97 | 32(17) |

Source: Small powerloom survey in Coimbatore taluk.

From this table it is clear that the greatest variation in rates occurs in weaving dhoties and shirting, and in pirn winding. The first function is done predominantly by men, and the second by women. Other functions show much less variation: joining, warping, and weaving grey gada. Again, the first is done equally by men and women, the second mainly by women, and the third by men. From this it can be seen that the variation in wages is spread almost evenly over functions performed by men and women, and there is no clear-cut difference on the basis of gender.

The wage rates themselves also vary. For wage workers, warping and weaving dhoties and shirting are the best-paid jobs. Women dominate in one and men in the other. Joining is paid somewhat less well, and pirn winders are the lowest-paid workers. Joining is done equally by men and women, and pirn winding mostly by women. This leads me to conclude that women have access to high-paying as well as low-paying jobs, but that the number of women in the former is smaller than in the latter.

Some powerloom owners pay their workers a bonus. This is calculated in different ways by each owner, either as a percentage of the wages earned or as a fixed amount. It is given only to workers who have worked a year in the same production unit. Weavers are almost always given a bonus, varying from 50 to more than 200 Rs. Joiners are given much less; the majority (80%) receive between 10 and 50 Rs. The pirn winders also receive only small bonuses; half of them receive no bonus at all, and 36% receive less than 50 Rs.

Medical expenses are said to be paid when accidents occur in the workplace itself. However, it was not possible to check this, as no accidents had occurred in the units visited. Such payments are at the discretion of the owner, as no labour legislation applies to the units in this sector.

Although there are no fixed workloads in this sector, the production of the women is fairly standard. Almost 80% of the women work more than eight hours per day, six days a week. They also work night shifts on alternative weeks, as there is no labour legislation preventing this. Family workers work shorter hours, usually less than eight hours per day, six days a week.

Producers are not worried about workloads in this sector, because workers are paid piece rates. When there is no work, they send the workers home with no pay. In order to discover the extent of underemployment, the average monthly wages reported by the women were compared with the monthly wages which the unit would have paid if twenty-six full days had been worked. The following table shows that pirn winders and weavers usually have work for the full month, whereas the joiners have work for 2/3 of the time, and warpers for only 14 days of the month. Although their function is better paid, they earn the same average monthly wages as weavers.

Table 4.11. Estimated underemployment in the powerloom sector in Coimbatore taluk

| | women (average monthly income) | men producers (average monthly income) | working days |
|---|---|---|---|
| pirn winders | 107 | 116 | 26 |
| joiners | 213 | 318 | 17 |
| warpers | 250 | 455 | 14 |
| weavers | 184 | 208 x) | 26 |

x) coolie weaver, weaving grey gada

Source: Small survey of women workers and producers in powerloom sector in Coimbatore taluk.

From this we can conclude that the wage system in this sector does not systematically discriminate against women. They have access to functions at each wage level, and work in functions where bonuses are given, just as do men. In some functions there is a degree of underemployment, but monthly wage levels remain at a level comparable with that of other functions in the same sector.

In the handloom sector, the handloom owner is paid a piece rate for his sarees by the trader from whom he gets his yarn. From this income, the few wage workers in the production must be paid: even where family labour is used within the production unit, warpers and joiners still must be paid. Their pay per warp is equal to a day's wages for a weaver. Table 4.12.A. shows the piece rates and their conversion to daily rates.

Table 4.12A. Average wage rates and conversion to daily rates in the Coimbatore handloom sector

| | average | minimum | maximum | daily rates total | per person |
|---|---|---|---|---|---|
| pirn winding | 2.10 | 0.40 | 4.50 (warp) | 2.10 | 2.10 |
| cone winding | | | | | |
| warping | 13.50 | 10.00 | 16.00 (warp) | 13.50 | 6.75 |
| starching | 18.90 | 14.00 | 25.00 (warp) | 18.90 | 4.73 |
| threading | 6.00 | 5.00 | 8.00 (warp) | 6.00 | 6.00 |
| weaving | 255.00 | 210.00 | 396.00 (warp) | 17.00 | 17.00 |

Table 4.12B. Distribution of women over functions and corresponding wage rates in the handloom sector

| functions | women as % of all workers | av. wages rates (daily p.p.) |
|---|---|---|
| pirn/cone winding | 97 | 2.10 |
| warping/ starching | 55 | 6.75 / 4.73 |
| threading | 93 | 6.00 |
| weaving | 25 | 17.00 |

Note. The indication of average daily rates for women is somewhat misleading, as the majority of women are unpaid family workers. The wage rates apply only to that small percentage of women who actually work for wages in the handloom sector (72% of the women work as family labor).

Source: Small survey of women workers and producers in handloom units in Coimbatore.

Although there is also no standard workload in this sector, the amount of work to be done is determined by the weavers in the family. If the weavers do not work, neither do the other family members who carry out the preparatory work. The general pattern is that women doing pirn winding work four to eight hours per day, and the weavers between nine and ten hours per day. Once a month, a holiday is taken. However, three or four days are spent in installing the new warp on a loom. This usually occurs once a month.

When coolie weavers are employed, as occurs in the larger handloom units run by master weavers, they are paid two-thirds of the owner's

receipts. Pirn winders are paid very low piece rates or flat daily rates. The warper, joiner and starcher are paid the same wages as when working for family units. In this situation, women are paid the lowest wages in the sector; they are concentrated in pirn winding and warping, and are found in equal numbers with men in joining. Men are concentrated in some low as well as some high paying jobs (see Table 4.12.B.).

Women working in a family unit are doing the work for no pay at all, as discussed above. Sons weaving with their father are also not paid in principle. However, in practice they are given a small portion of the income they have earned - calculated from the number of metres woven - as their personal income. For women this is never done, and is in fact considered shameful when suggested. From this description, we can see that women work shorter hours than men in handloom weaving, but that their wage levels are either nil or very low compared to those of men. The fact that the family is the production unit has created a large difference between the work and rewards received by men and women.

Labor mobility

Among the most important characteristics of jobs for Indian workers are stability and a wage level which allows the family to survive.

In the mill sector, the status of 'permanent worker' gives mill workers a guaranteed job until they are 58 at full wages and with all the emoluments described in the previous paragraphs. This status is supposed to be conferred automatically after having worked in a mill for two years, but in practice the management drags its heels until another year has passed before giving permanent status.

Up to 10% of the workers in each mill never receive this status, but remain badlis. These workers can never be sure that they will have work on a given day, and must hang around the mill waiting for the timekeeper to recruit them when a new shift begins. They receive only flat rates, and have no access to other benefits of the usual mill worker.

The apprentice system was introduced recently, allowing mills to reduce labour costs during the first three years of a mill worker's employment, and making it possible to fire an employee without any consequences.

The 1981 figures show a clear difference between men and women in status. Women are apprentices in only seven mills out of twenty, whereas male apprentices are found in sixteen mills. Women are casual workers in seven out of twenty mills, and men in fifteen mills. The majority of men and women workers are permanent workers. This means that the current generation of women workers have a good position, but that there will be only a very small future generation of women workers, because so few women are being recruited as apprentices.

The employment for women in the mills is quite stable. The majority of women have had only this one job (66% of all women). 90% of them have held their job for more than ten years, and half more than 20 years. In cases where they had the job before they were married, they stated that there was no question of giving it up after marriage. In fact, the mother-in-law and husband usually encouraged them to stay on.

Stability over the generations has become an important issue as unions and workers have attempted to guarantee at least one mill job per family for the next generation. About one-fourth of the women mill worker's families have been successful in getting a mill job for the next generation. Difficulties in doing so have been described in the previous paragraphs. One woman, whose husband also works in a mill, described her

situation as follows: '.. I have two sons, who could take over my job or my husband's job.. the union encouraged my husband to retire early so one son could be taken on...but then they wanted 2,000 Rs. ...and in my mill they won't take my sons because they are too old.. in three years when I retire what are we going to do?'

In the powerloom sector, there is less stability in employment. Not only Women here work shorter periods in each job: 63% of the women had other jobs before the present one. More than ninety percent of all women have had their present job less than ten years. The women working in this sector are not very worried about the instability of their current job situation, because new jobs are available. They will go from one production unit to the other in search of better pay, and a more friendly boss, within the limits allowed by their family's concern for propriety. The same instability also holds true for men. The employers complain a great deal about the weavers, who move from one job to the other, remaining only a few months in each. For male weavers, however, it is possible to move from the powerloom sector to the mill sector, which is not possible for women workers.

In the handloom sector, stability is inherent in the fact that the family unit is also the production unit. About half the women have done their work in production for over ten years, and one-third for over twenty years. The instability in this sector lies in the fact that even a whole family working together cannot always produce sufficient income to support itself. The whole family has to change over from one type of work to another. The extent to which this happens in the Coimbatore region can only be estimated from the census figures. These show that in Coimbatore, between 1961 and 1971, there has been a 4% increase in the number of men working in this sector, and a decrease of 64% in the number of women. However, figures for women are very unreliable, and in this sector, it seems more likely that women and men experience similar trends. In Madras as a whole, there was an 8% decrease in number of men working in handlooms in the same period. It seems, therefore, that the situation in Coimbatore was fairly stable in comparison to the state as a whole.

## Mobilization

Only in the mill sector is there a large degree of mobilization. More than 90% of all women workers are union members. Women are concentrated in only several unions. 25% are HMS members, traditionally the largest union. 19% are members of TNTUC, a split-off from the employers' union INTUC. 13% of the women are members of the INTUC. The two communist unions together have only 13% of all women as members (15). Women's reasons for joining the union vary. Most have joined on the basis of their own decision (25%). A fair number have chosen the majority union in their mill (18%), or the one to which most of their colleagues belong (15%). There is a very practical reason for this attitude; if there are not enough members of a particular union in one mill, they receive little attention or help from the union. Another group joined a particular union because they had relatives in the union (17%), a form of cohesion that also leads to greater attention from the union.

Union membership does not imply active participation, however. Three-quarters of the women members do not actually participate in union activities. The reasons they give are: a) no time because of their

household duties; b) union activities are 'men's work'. Asked whether they would prefer to have a women's wing in the union in which to participate, 74% said no. The majority did not see the sense of it, because their time would still be limited, and a small number stated that women were not cooperative enough (11%), or not capable of running a group (12%). Others, however, were in favor (15%), as they considered it easier to approach women rather than men with problems (87% of the women who reacted positively).

The women who actually participate go to the gate meetings held just outside the mills where they work. This is an activity more common in Coimbatore than in other regions, because of the wide-spread location of the mills. They seldom go to meetings at union headquarters, or general meetings. Only a small percentage of women has actually had help from the unions at an individual level (20% of all women workers). In the majority of cases, this involved getting employment for them with one of the mills. Usually, this has occurred when the woman's husband had died, and she could inherit the job. From the side of the unions, few demands have been made for women workers. In the past ten years, there have been two demands made at an industry-wide level (i.e. in the southern region). The first concerned keeping on the existing number of women workers in the mills until their retirement, and was related to rationalization in the reeling and winding departments. This demand was agreed to by the employers in the agreement signed in 1972. The second demand was made during the unrest in 1978, and consisted of demanding that 25% of the total work force be women. Union leaders have stated that this was used as a negotiation demand, and was not meant to be seriously fought for (16). It was not accepted by the employers.

However, women do mobilize from time to time by (their) department. This occurs when they have problems with the workers in the departments ahead of them in the production process; particularly when the spinners do not produce a good quality of yarn. Half the women who mentioned problems within the mills talked about this particular problem. Whether action was taken by the women depended on the union spinners belonged to. If it was the same union as the one the women in the reeling and winding department belonged to, they were reluctant to undertake action. If not, they would do so. Ramaswamy has mentioned that solidarity between men and women workers is sometimes lacking (1977: 53). This was illustrated by a strike taking place in one mill during my stay, in which the women reelers held a sit-down strike in the mill for a day because their heirs were not being taken on by the mill. The male workers did not strike, and urged the women to stop, as their strike made it impossible for them to work. The employers and police together put an end to the strike, without giving in to the women's demands.

In the powerloom sector, there is as yet no formal pattern of mobilization. Production units are so small, and widespread that the unions have shown little interest in organizing workers. In only one case an attempt at mobilization has been made; a communist union tried to organize the workers in the largest powerloom unit in the region. The workers struck for higher wages, and the status of permanent employee. The employer declared a lock-out, and fired all the workers. After half a year some of the workers were taken back, but those active in the strike were not.There is some knowledge of the idea of a union among the women working in this sector (20%), and most were in favor of having a union. However, there is as yet little necessity for it, in their opinion, because jobs are plentifully available.

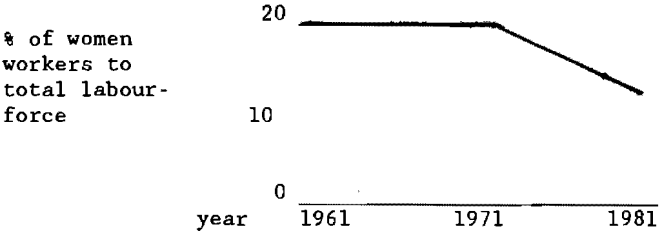
In the handloom sector, there is no question of mobilization in unions almost by definition. Even demands by women within the family are practically non-existent; for instance, the idea of demanding income for the work they were doing was considered quite shameful for a woman. The ideal of the 'sacrificing wife' in this sector still seems quite strong.

Changes in the gender division of labour

In the powerloom sector we have found a gender division of labour with little differentiation between men and women in the various aspects of work covered. This is more in line with what one would expect of a wage-based production system than what we find in the mill sector. Therefore, it seems important to consider what processes in the mill sector have led to a division of labour in which women have been relegated to a secondary position.

Information on the number of women workers in the Coimbatore mills has shown that the percentage of women workers in the total labour force has been decreasing from 1971 to 1981. These data were fitted to a line with an accuracy of.92. The line has been expressed as $y = -40.77 \log x + 192$, in which xl is the year (xl being 1900) and y the percentage of women workers in the total labour force (17). This means that there has been a fairly steep decline in the percentage of women workers in the total labour force. This trend is, however, of recent origin. In 1961, the actual percentage of women workers was significantly lower than the theoretical level based on a backwards extrapolation of the given trend. Therefore, in the period between 1968 and 1973, there must have been a break in the trend, such that before that time, there was a fairly level trend in the percentage of women workers, which afterwards began rapidly declining. Table 4.13. shows the results.

Table 4.13. Trend in the participation rates of women workers in the Coimbatore mill sector




Source: SIMA data

At the same time that the number of women workers in the mills declined in percentage of the total work force, it also declined absolutely. In contrast, the number of male workers per mill in Coimbatore increased absolutely. This means that there is a clear difference in the use made of women's labour in the mill sector in that period, because the alternative explanation of decrease due to 'natural causes' does not hold true for both men and women (18).

The managers in Coimbatore have given an explanation for the decreasing trend in use of women's labour: the shift from production of hank yarn to cone yarn, accompanied by the use of more than one shift in the cone winding department. In order to check this, the trends in production of hank yarn and cone yarn over the last ten years were checked. The following table shows the increase in production.

Table 4.14. Growth in production of hank and cone yarn for all India (1.000 kgs.)

| Year | Hank yarn | Cone yarn | | Hank yarn | Cone Yarn |
|---|---|---|---|---|---|
| 1972 | 222,287 | 119,825 | | | |
| 1973 | 213,224 | 125,985 | growth | | |
| 1974 | 229,097 | 145,878 | 1972-1979 | 4.48% | 43.61% |
| 1975 | 236,971 | 144,961 | | | |
| 1976 | 232,993 | 156,061 | average | | |
| 1977 | 203,742 | 148,872 | yearly | 0.64% | 6.23% |
| 1978 | 218,617 | 174,084 | growth | | |
| 1979 | 232,425 | 182,910 | | | |

Note. The figures are the civil deliveries of yarn; i.e. yarn brought on the open market. The Bombay mills use more yarn than they produce in their cloth production, so that yarn figures pertain mainly to the southern mills, and can be used as a proxy for direct figures.

Source: Handbook of Statistics on the Cotton Textile Industry, 1978, 1980; Indian Textile Bulletin, 1979 (Annual number).

These figures show that the production of cone yarn has indeed grown much quicker than that of hank yarn. The reason for this is not the increase in prices, as prices for both hank and cone yarn have risen equally since 1971. It is related more to the fact that profits in cone yarn production are higher than in hank yarn production (refer back to 4.2.).

How does this increase in production compare with increase in labour productivity? Is there a lag in labour productivity behind production, suggesting the use of either new machines or shift production? SITRA (1981) recently carried out a survey among member mills in the south on the increase in productivity in the reeling and winding departments. On the basis of figures from 191 mills, they calculated the following increase in labour productivity from 1960 to 1980.

From Table 4.15., we can see that the increase in labour productivity has been much higher in the cone winding department than in the reeling department. For the latter, the labour productivity from 1972 to 1979 almost completely stagnated. In the former, it increased on average by 3.9% per year. Comparing these figures with the increases in yarn production, we can see that labour productivity in the reeling department has remained at a par with production in hank yarn, whereas labour productivity in cone winding has remained far behind the increase in cone yarn production. This leads me to the conclusion, that the number of workers in the reeling department must have remained the same, or

Table 4.15. Labour productivity in the reeling and winding department of southern mills

| | reeling dpt. | 2-year change | winding dpt. | 2-year change |
|---|---|---|---|---|
| 1960 | 100 | | 100 | |
| 1966 | 102 | | 110 | |
| 1968 | 102 | 0.0 | 118 | 7.3 |
| 1970 | 111 | 8.8 | 132 | 11.9 |
| 1972 | 110 | -0.1 | 137 | 3.8 |
| 1974 | 111 | 0.1 | 143 | 4.4 |
| 1978 | 112 | | 141 | |
| 1980 | 113 | 0.1 | 146 | 3.5 |

Source: SITRA, Productivity in reeling and cone winding, 1981: 9, 22.

decreased (if workloads became higher in that period.) The number of workers in the winding department must have grown (or increased by using more shifts), or a new type of machine used that was more productive. The latter is not the case, as data collected from a Textool manager shows that the man/machine ratio has remained the same in cone winding in that period. Therefore, it seems most likely that the mills in fact have, as the managers have stated, started to increase shift work (19).

This conclusion has important consequences for the use of women's labour, as women are not allowed under the Factories Act to work in the second and third shifts. It now becomes clear that the decreasing trend in the use of women's labour in the mill sector is the result of rationalization in production by the mills in a period of lower profits, coupled with labour legislation discriminating between men and women. Obviously, this legislation has existed quite some time (since 1926), but has had little effect on the use of women's labour until now, because the use of three shifts was not widespread in the south (20).

## 4.4. Household, work and autonomy

In this section, the degree to which a woman's economic activities can extend her social autonomy within the household is examined. There are two major assumptions made here. The first is that women's household and personal characteristics structure women's social autonomy to begin with. The second is that a woman's economic activities do influence her social autonomy within the household; but that the extent to which they do varies according to the characteristics of such economic activities. Therefore, in this section, first women's household and personal characteristics are considered and related to their social autonomy, and secondly, the characteristics of women's economic activities are related to her degree of social autonomy.

Obviously, the extent to which women extend their social autonomy on the basis of economic activities is always structured by the existing sociocultural context. The context discussed here is limited to the

household situation of the women workers with whom I am concerned (21). This has been done because it is within the household that the various sociocultural aspects extant in the wider society acquire their particular forms and variations. First, caste variations in ideology concerning women are looked at briefly. Secondly, the characteristics of the household women belong to are considered. These characteristics include: a) household composition, b) number of working family members, c) level of food expenditure, and d) migration. Thirdly, women's personal characteristics are examined. These include: a) age, b) marital status, c) number of children, and d) education. Finally, women's current activities within the household are considered. These include: a) the extent of women's daily housework, and b) women's contribution to family income.

The degree to which a woman's economic activities can influence her social autonomy vary according to the characteristics of the work. The aspects concerning work whose influence has been considered are derived from the previous sections. The first is the type of labour relation (wage work versus unpaid family labour) under which women work. The second is the extent to which women work as a cheap labour reserve (as indicated by the percentage of women workers to all workers). Both relate to the overall situation by type of firm. The following aspects pertain to the situation within a given type of firm. These are a) the degree of specialization by function, b) the degree of segregation between men and women at the function level, c) differences in wage levels between men and women, and d) the degree of mobilization of women workers.

Before discussing the degree in which the social autonomy of women varies according to household situation and women's economic activities, it is useful to look at the 'major life decisions' which constitute the social autonomy profile. Why are the decisions used considered major? (see Appendix B.1.). Each Indian family has to achieve a number of objectives in its existence: 1) an income sufficient to keep the family together, 2) a secure 'old age' for the parents, and 3) a secure 'future' for the children. Contributing to these problems are the schooling and work of the various family members (with a clear difference in objective between the daughters who will belong to another family in the future, and the sons who must take care of their parents), the consumption of family income, the marriage of the children, and the number of children wanted.

Schooling, if carried far enough, is a requisite for better-paying jobs, which can in turn raise family welfare in the short-run, and security in old age in the long-run. Women explicitly take such factors into account; a good son is one who takes on his responsibility versus his parents, after they have invested the necessary money and time in him. For girls, schooling and jobs are also seen as favourable, provided there is enough money left after schooling for the sons has been taken care of. A girl's working contribution of income is a temporary phenomenon in the life of a family, as her income goes to the family-in-law after marriage. At that point, working for her again becomes a major decision, as the family-in-law weighs the 'pro' of more income against the 'contra' of more freedom of movement for the daughter-in-law.

The decisions concerning marriage apply to the amount of dowry to be paid or received, and the relationships gained within the family. If a daughter-in-law arrives, there is more help with the household work; if a daughter leaves, she must have sufficient dowry. The consumption of family income is related to the level of income; the more money available, the more certain decisions have to be made concerning the goods to be consumed: food expenditures dominate increasingly at lower levels of income. Together then, these decisions constitute a series of life decisions which are important in family life, and involve a number of people in deciding them. Finding out to what extent women participate in these decisions gives us an indication of the degree of social autonomy women have.

### 4.4.1. Women, the household and autonomy

First, an attempt is made to trace differences in customs concerning women in the two jati's in the Coimbatore region which are dominant in the textile industry - the Kammavar Naidus, and the Devanga Chettiars (22). The Devanga's consider themselves Brahmins, which would imply that they consider it important to seclude their women. This is in accordance with the actual situation in Coimbatore, in which the majority of the Chettiar families (60%) refuse to let their daughter work outside the house. Their traditional occupation of weaving is legitimated by legends in which the god gave them orders to clothe the human race (Thurston, 1909).

The Devangas are split up into several endogamous groups; one Telugu-speaking, the other Kannada-speaking, and several others which are not specified. The first two groups are both represented in Coimbatore: the Telugu-speaking group is larger than the Kannada-speaking group (resp. 560 and 214 out of 824 handloom producers). Thurston does not, however, recount which customs remain the same among the different sub-groups, and which differ. All he says is that the onset of puberty among girls is celebrated, and that marriages are celebrated by Brahman priests. As this does not differ from usages among other castes observed in Coimbatore, I can draw no firm conclusions concerning customs towards women at this level.

The Kammavar Naidus, as they call themselves in Coimbatore, are called Kamma's by Thurston. It is likely that the same group is meant, as he calls them a jati of agriculturalists and traders, who use the title of Nayady (= gentleman). Harriss says the same of the Naidus in Coimbatore; traditionally they were cotton farmers, who subsequently went into trading and industrial manufacturing (1982: 948). Thurston does not have much to say about women in this jati except that 'the women in the south are less strictly secluded than the women in the north'. He mentions a legend which explains the difference by a difference of opinion between several jati's concerning the participation of their women in farm work versus more strict seclusion. In addition, he mentions that remarriage of widows is not permitted in these castes; this conforms to the pattern today, in which the remarriage which does occur is admitted only in strict confidence.

The women in Coimbatore come from different caste backgrounds, which vary by sector. In the mill sector, the majority of women come from the Kammavar Naidu jati to which the majority of mill owners also belong. Many members of this jati went into industrial work one or two generations ago, and a minority still have some connection with agriculture. In addition, a

smaller group (23%) are Chettiars. The Chettiar jati is one with many sub-divisions, but with a strong representation in certain forms of trade. In the powerloom sector, the Chettiars are represented more strongly (40%), with a small group of Mudaliars as well (23%). The Mudaliars are a jati with strong connections with agriculture in the Coimbatore area. In the handloom sector, the vast majority of women belong to the jati traditionally associated with this work, the Devanga Chettiars, both the Telugu- and Kannada-speaking groups (87%). The influence of different caste background on the degree of autonomy, possibly linked to the degree of seclusion between Naidus and Chettiars already mentioned, is reflected in the differing degree of autonomy. Naidu women have more autonomy than other jati's, and Chettiar women have less.

Secondly, the characteristics of the households to which women belong are examined. The majority of households are nuclear households (in the handloom sector, 95% are nuclear households; in the powerloom sector 87%). Only in the mill sector is there a significant number of joint family households (37%). The reason for this difference is not quite clear. Some authors have said that it is related to the family life cycle, but the correlation between family type and the women's ages is not large. Others have suggested that the joint family structure is related to the extent of family wealth. However, the correlation between family income and family type hardly exists. In my opinion, it most likely is related to the extent of employment to be found nearby in the mills. Family members come to stay when they have jobs in the area which they cannot reach from their usual home (23).

The number of working family members differs strongly by sector. In the mill sector and powerloom sector, it is clear that the number of working family members is smaller than in the handloom sector. This has to do with the fact that the level of income earned by families in the first two sectors is significantly higher than in the handloom sector. This means that, whereas everyone in the family has to contribute to the weaving in the handloom sector, in the other sectors, some family members can afford to be 'dependents'. In the mill sector, the family income varies between 500 and 1,500 Rs. (125 - 330 Dfl. in 1981-82) per month for the majority of the families. In the powerloom sector, this is generally lower; between 500 - 1,000 Rs. per month. The handloom families come even lower on the scale, earning less than 500 Rs per month (46% of all families).

Differences in levels of income are also reflected in the way income is spent. The level of food expenditures in comparison to the total family income was taken as a primary criterion. It increases as total family income decreases. In the handloom sector all families spent more than 20% of their income on food, 66.7% more than 40%, and 23% more than 80%. In the mill sector, on the other hand, only 7% of the families spent more than 80% of their income on food. The families in the powerloom sector were more evenly divided: 17% of them spent more than 80% on food, and 63% spent between 21-60% of their income on food. The description of the food used also reflected the different standards of living. In the mill sector, women told us that they would eat meat several times a month. In the handloom sector, families could seldom afford to buy meat. The following table shows the results.

Table 4.16. Food expenditure as percentage of total family income by sector

| | 0-20 | 21-40 | 41-60 | 61-80 | 81-100 | NA | Total |
|---|---|---|---|---|---|---|---|
| mill | 7 | 30 | 43 | 7 | 7 | 7 | 100.0 |
| powerloom | 7 | 17 | 27 | 20 | 17 | 13 | 100.0 |
| handloom | 0 | 23 | 37 | 7 | 23 | 10 | 100.0 |

Note. Totals in the mill sector add up to more than 100%, due to rounded-off figures.

Source: small sample of women workers in Coimbatore.

The extent to which a family is in debt is related to its income. However, questions concerning loans and debts were considered somewhat sensitive, and it is not certain the answers were very reliable. Answers concerning the degree to which the woman and other family members were able to save money were more forthcoming, and give an indirect indication of the family's economic situation. In the handloom and powerloom sector, 63% of the families were not able to save any money. In the mill sector, on the other hand, 67% were able to do so.

The majority of the women's families are originally from Coimbatore taluk, although larger numbers of families in the handloom and powerloom sectors are migrants than the mill workers' families. The differences in urban or rural location of the women's families were presumed to influence their autonomy, taking into consideration rural and urban differences in life style (24). The influence of marital status was found to be larger than that of location, however. The influence of the family's migration on women's social autonomy as compared to residents born in Coimbatore was found to be negligible. Therefore, location and migration had little influence on women's autonomy.

Thirdly, women's personal characteristics are looked at (see Appendix D.). In the mill sector, women are older than in both other sectors. In the powerloom sector, there is a certain concentration of young women, and in the handloom sector there is a wide spread of ages. In the small mill survey, 80% of the women are over thirty-five, whereas in the powerloom sector only 26% have reached that age or older. In the handloom sector, 53% are over thirty-five.

There is a fairly large difference in level of education between women in the powerloom sector, and those in the handloom and mill sector. In both the mill sector and handloom sector, equal numbers of women are illiterate or have some degree of primary schooling (respectively 47% illiterate and 47% primary schooling, and 40% illiterate and 43% primary schooling). In the powerloom sector, only 20% of the women are illiterate, 43% have some primary schooling, and 37% have some degree of secondary education. The relationship between autonomy and educational level was found to be negligible. However, this may be due to the fact that the new generation has had more access to education than did the older women when they were young. When checked for age, the relation between autonomy

and education increased, but not significantly. Therefore, it seems that education has little influence on social autonomy, at least at this level of education.

Most of the women working in the three sectors are married, but there is a significantly larger group of unmarried women in the decentralized sectors (around 30% of all women). The number of widows in the mill and handloom sector lies around 7% of all women, indicating that in the handloom sector women of all ages and marital status participate in that type of work. The widows, together with young children from poor families, more often work for wages, whereas the usual pattern is women working as unpaid family labour.

The differences in marital status correspond to the variations found in the number of children women have; in the handloom and powerloom sector 35-40% of all women have no children, whereas in the mill sector 75% of all women have children. There is no significant difference in the number of children women have in each sector. Current differences in age, marital status and number of children do not indicate a difference by sector in the recruitment of women since, as indicated in a previous chapter, all women are recruited at an early age. It does indicate, however, that women are still being recruited into the decentralized sector units but in much lesser numbers into the mills.

A number of suppositions concerning the relationship between personal characteristics and social autonomy were traced.

A first supposition was that married women will have more autonomy than unmarried women. This relationship was found to be very strong ( .59).

It was also supposed that women's autonomy would increase with age. For the Coimbatore women this assumption was found to be rather weak. In order to check whether some other factor interfered to obscure this relationship, the relationship was checked, selecting only married women. In this case the relation became even weaker. This means that, contrary to what is usually stated, age alone seems to have little effect on autonomy (25).

A third supposition was that autonomy increased with the number of children, particularly sons. Therefore, the relation between autonomy and the number of children was traced for all the married women, and was found to be practically nil. However, we have already seen that the number of women having children varies by sector; but in checking the effect of sector, it was found still to be very weak. This indicates that this factor also, contrary to what is usually stated,seems to have little effect on autonomy.

A fourth supposition was that women have less autonomy when they live in joint families than when they are part of a nuclear household. This idea was considered for all women, but the relationship turned to be very weak also.

Finally, women's activities within the household are considered. There is some difference in the time women spend on household work in addition to their productive work in the three sectors. Mill women generally work between eight and thirteen hours per day totally, spending up to four hours work on household activities after working eight hours in the factory. Women in both the powerloom sector generally spend between eleven and thirteen hours per day totally working; however women in the handloom sector spend more time on household work than those in the powerloom sector (resp. 20-40% of the total working hours; and 0-20%).

A typical working day for women in the mill sector entails getting up at dawn, cooking breakfast and food to be carried to the mill (generally two hours work), eating, walking to the mill (mostly half an hour), working there for eight hours, possibly with overtime), coming home, resting for an hour, cleaning the house, preparing an evening meal (possibly with the help of a daughter) during two or three hours, eating and going to sleep. On the weekly day off, cleaning the house and washing clothes has priority; if time remains, women will go to the movies. Shopping is done by the women or their husbands in the mill stores (staple supplies) on the way home (daily necessities). Getting water is done mainly by the women, but with the help of the men of the family if the source of water is distant (particularly drinking water).

A working day for the women in the handloom sector includes more housework on average than in the mill sector, as it is combined with work at home. Half of the women prepare two warm meals; another thirty per cent prepare three hot meals per day. In preparing two hot meals, they spend two to three hours per day cooking. A second major activity is getting water; in half the women's households one or two hours per day is spent on getting water (both for washing and drinking). Other activities include washing dishes and washing clothes, which is done several times a week. In this sector, women divide the household work among several women in the family; two-thirds of the women share the work with daughters and in-laws.

The women in the powerloom sector spend less time doing domestic labour (between 0-20% of total working time on average). This is understandable, as they are younger on average than women in the other sectors, so that other women in the household still carry out the major part of the housework (20% do not carry out housework). In two-thirds of the families, more than one woman contributes to the housework. Half the women prepare two meals per day, spending two to three hours cooking before and after work. In half of the families getting water takes more than one hour per day (occasionally sons and daughters will help get drinking water). Washing clothes is usually done about once a week, and requires several hours then.

Women's contribution to family income varies among the different sectors. The contribution of unpaid family workers is obviously there, but very difficult to express in cash terms. However, suffice it to say that if women and children did not carry out the preparatory work in weaving, there would be very little chance of the husband being able to carry out his trade. When we take into account only cash income (for lack of better criteria) it is clear that 56% of women in the mill sector contribute between 20 to 60% of total family income. In the powerloom sector 43% contribute 0-20%, and in the handloom 70% contribute 0-20% (see Appendix D.). The interpretation of these figures is somewhat open. The fact that women in the mill sector contribute a relatively large percentage to the family income is a consequence both of their families generally working in a wage labour context, and the strong idea that providing income is also a way of showing one's good 'motherhood'. In the powerloom sector, there seems to be a shift going on from agricultural backgrounds to industrial labour within the Mudaliar families; it may be that young girls are considered to be the only family members not necessary for agricultural work within the family context (compare Sacks in Sacks and Remy, 1984: 19).

The extent to which women carry out household work in addition to their productive work may influence their autonomy. It was assumed that the more time they spent on it, the smaller their autonomy would be. This relationship was found to be almost non-existent. However, when the marital status of the women was taken into account (as young unmarried girls are not considered responsible for the household), the relationship between the two factors then became much stronger (26). This result shows that in fact larger loads of household work have a negative impact on married women's social autonomy. This would seem to be related to the responsibility delegated to them of running the household.

In conclusion, it is clear that out of all the factors relating to ideology concerning women, household characteristics, and women's personal characteristics, the following had traceable influence on women's social autonomy. These were: a) the jati background of women, b) marital status, and c) the extent of women's daily housework.

### 4.4.2. Work and autonomy

In this section, the differences in autonomy women derive from participation in productive work are related to the characteristics of the work they carry out.

The main propositions concerning the overall participation rates of women are:
a) participation of women in wage labour leads to greater social autonomy than participation in home production (wage labour versus unpaid family labour); b) participation in wage-labour production increases their autonomy more in the expansion phase of a sector than in the rationalization phase; the former having a more equal gender division of labour than the latter.

The first proposition is found to be true. There is, in fact, a strong positive relationship between the use of wage labour and women's autonomy (.36) in comparison to their participation as unpaid family workers. In addition, there is a negative correlation between the degree of women's autonomy and working in the handloom sector as unpaid family labour (-.60).

For the second proposition, differences between the gender division of labour in both powerloom and mill sector were looked at. In the powerloom sector, there was a fairly weak gender division of labour, but in the mills a much stronger one. The latter situation was seen to be the result of the process of rationalization taking place in that sector. This means that we would expect women to derive a greater degree of autonomy from participation in powerloom production than in the mill sector.

There is a positive correlation between work and social autonomy in both the mill and powerloom sector, but it is stronger in the mill sector than in the powerloom (mill sector: .26; powerloom sector: .17). This would seem to refute the initial assumption of a weaker correlation between a sharper gender division of labour and participation in wage-labour production. However, the personal characteristics of the women also play a role, as has been described, the most important factor being marital status. Taking the women working for wages in the mill and powerloom sectors, and controlling for marital status, it becomes clear that the degree of autonomy derived from work in the powerloom sector is much higher than that in the mill sector. Table 4.17. shows the results.

Table 4.17. Correlation between autonomy and wage labour per sector, controlling for marital status

| | unmarried | married | widow |
|---|---|---|---|
| mill sector | | .04 | 1.0 |
| powerloom sector | .70 | .33 | 1.0 |

At the level of the firm, a number of aspects have also been considered in relation to autonomy.

The first one concerns the degree of segregation by function; access to functions and function segregation. It was difficult to relate access to functions to the degree of autonomy without inadvertently measuring other factors simultaneously, such as 'sector' itself. This is related to the fact that in the mill sector only two functions are open to women at all, whereas in the powerloom and handloom sector, women have access to four functions. Because of this problem, access to functions was not measured but only the degree of gender segregation by function was correlated with the degree of autonomy (27). It was possible to do so for the powerloom and handloom sector, because a scale of functions by segregation could be made (four functions in each sector).

For the mill sector, the assumption was made that the stronger the segregation, the less autonomy women would derive from their work. The results indicate that there is a strong negative correlation between the degree of segregation and autonomy. In the powerloom sector, the correlation between the degree of segregation and social autonomy is the highest ( .60). In the handloom sector, the correlation is somewhat lower, ( -.40). In the mill sector, the ratio of women working in the winding department compared to the women working in the reeling department was so skewed, that the correlation was much smaller ( -.05), and cannot taken to be representative.

The scale used for segregation did not distinguish between situations in which few women worked with many men, and many men worked with few women. It was further assumed that this would, however, make a difference in the degree of autonomy women derived from their work. After all, in the first situation, it seems likely that women would be more likely to develop solidarity with other women workers. The results show that in the handloom and powerloom sector the correlation between more women in a particular function and the degree of autonomy is in fact a positive one (28). Taking these two results together, it suggests that the less segregation there is between men and women, the greater the degree of social autonomy women will derive from their work. This is maximized at the point where the division is fifty-fifty.

Secondly, the influence of differences in wage levels between men and women was taken into consideration. It is clear that women in the mill sector are being relegated to the lower-paying function to which they still have access. In the powerloom sector, women currently have access to functions with both high and low wage levels. In the handloom sector, most women do not receive any pay, but those that do, have access to mostly low-paying jobs, with the exception of the family specializing in warping and joining. In order to compare the different wage levels, the average wage levels of the different functions were compared to the overall

average wage level by sector. The results show that there is a positive correlation between wage levels, as compared to average wage levels and women's autonomy ( .20).

Finally, the influence of mobilization is taken into account. To examine this influence for the powerloom sector is fairly difficult, because of the current situation in Coimbatore. In the powerloom sector, there is little mobilization among workers as yet. Only few women were aware of the existence of trade unions and none belonged to them.

In the mill sector, on the other hand, all permanent workers are members of a trade union, including women. However, only a minority of the women are active in the unions (22% of the women in the large sample). This presented a problem in analyzing the influence of this factor separately, as it could not be distinguished from the cluster of factors coming under 'sector' as such. Therefore, differences in degree of autonomy between women who were members of the trade unions on paper and those who are actually active in the trade union were considered (29). There was little correlation between the two factors, suggesting that active participation in the trade union does not lead to greater autonomy. This could be due to different factors: for instance, the fact that trade unions are dominated by men; even where women participate actively they do so as followers rather than leaders. The lack of women at any level of trade union leadership does not contradict this conclusion. Another possibility is that the trade unions are so little concerned with women's problems, that women workers are not mobilized around their social position as 'women'.

From this examination it is clear that 'gender' elements play an important part in determining the extent of social autonomy women can derive from their productive work. First, it is related to the distinction between unpaid family labour and wage labour, and indicates that the latter correlates positively with women's autonomy. However, the opportunities that wage labour presents in improving women's autonomy are limited by the extent to which a gender division of labour is again introduced. Second, access to functions is negatively correlated with women's autonomy. Thirdly, higher degrees of segregation by function between men and women reduce the possibilities of women to gain some degree of autonomy from their productive work. Fourthly, differences in wage levels related to the different functions women carry out, influence the degree of autonomy derived from their work. Finally, it is clear that mobilization in trade unions as far as women are concerned, has not gone far. This applies even to the mill sector in which women are officially members of trade unions, but in which their actual participation is much less. Such membership has not had a positive influence on their social autonomy.

## 4.5. Conclusions

The questions posed were: 1) how do different types of production organization develop and influence each other; 2) how is women's work structured (over time and by sector) by caste, class and gender relations; and 3) what effect does women's work participation have on her social autonomy?

The following trends can be seen from an examination of types of production units in the three sectors.

First of all, government policies have been partially successful. The mill sector has in fact a reduced share in production; on the other hand, the powerloom sector has become as important as the handloom sector in production, which does not conform government policy at all. This implies a growth in workshop production, and a decrease in family production.

Secondly, there has been a certain overlapping of the products made in the three sectors. Cotton cloth has been produced by all; however, reservation of certain products has limited the degree of overlap. Currently, overlap is increasing as powerlooms make products belonging both to handloom and mill sector. The changeover from producing hank yarn to cone yarn in the mills, will lead to a decrease in raw materials from this source for the handloom sector.

Concerning the use of technology, it can be said that the mill sector is going through a phase of rationalization. This has meant that machine and labour productivity have been increased in the last ten years to a significant degree. This has been accomplished by replacement of machinery, and by increases in workloads and number of shifts worked. It has also led to a shift to more profitable varieties of yarn and cloth. In the powerloom sector, there is an enormous expansion in capacity and production going on; technology is similar to that used in mills as far as looms are concerned. Preparatory work is done by machines developed solely for this sector. Shift work is extensive, but loosely organized. In the handloom sector, existing looms are used by more than one generation and technology has changed little. The labour process also has hardly changed.

The gender division of labour varies between sectors. In mills, women are the smallest percentage of the labour force; 14%. In the powerloom, they are 33% of all workers (including unpaid family labour), and in the handloom sector, they are 47% of all workers. In the mills, the use of women's labour has decreased rapidly as a result of rationalization, coupled with restrictive labour laws which apply only to women workers. In the powerloom sector, there has been a greater demand for labour than supply, and this has led to an increasing use of women's labour as the production units grow in size. In the handloom sector, the use of women's labour does not change much, as it is related to her membership within the family, the unit of production.

Sales channels in the mills are mainly controlled by their agents. In both powerloom and handloom sectors, such channels are almost exclusively in the hands of non-producers. There is an important group of handloom merchants, who play a dominant role in financing and marketing vis-a-vis the producers both in the powerloom and handloom sectors. However, producers in the handloom sector are more bound to these merchants, whereas the powerloom producers have experience with a variety of channels: merchants and mills. In the handloom sector, profits go to merchants rather than producers, whose income is very low.

The linkages between the sectors are several: a) the mills subcontract out production of some products to the powerlooms, avoiding problems of higher wage labour costs, fringe benefits, and trade union organization; b) handloom merchants link the powerloom and handloom sector, as they subcontract production to both in competition with each other.

The second question concerned the gender division of labour within the firm.

First of all, women are found in all types of labour relations within the three sectors, but with different types dominant in each sector. In the mill sector, women work exclusively as permanent workers, but are not newly taken on. Men are being hired and are found to work as both casual labour and apprentices. In the powerloom sector, both wage labour and unpaid family labour exists for women in equal numbers; for men, wage labour is more prevalent. In the handloom sector, 75% of the women work as unpaid family labour and the remainder as short-term wage labour.

Secondly, the degree of segregation by function also varies. In the mills, there is very strong segregation of men and women by function. In the powerloom sector, women form more than 50% of all workers in each function except weaving, and have access to all functions. In the handloom sector, women almost exclusively carry out the preparatory functions. They weave only if male members of the household are not available. Segregation is greater than in the powerloom sector.

Thirdly, women are still recruited as cheap labour reserves in the handloom sector. Previously, this also occurred in the mill sector where they were given work in the most labour-intensive departments. However, their position has changed due to enforcement of labour legislation by trade unions, and they are now not considered as such a reserve. In the powerloom sector, there is little differentiation in terms of recruitment between men and women, as all are relatively cheap. The expectation exists, however, that a similar process as that occurring in the mill sector could occur in powerloom production as well.

Fourthly, substitution of men for women does occur in the mill sector. It is linked to the fact that women receive more protection from labour legislation than men (no night shifts allowed), so that when this is enforced, men are considered more 'useful' workers. Substitution does not occur in the handloom or powerloom sectors.

Fifth, deskilling has not been discussed as such, but under the heading of workloads and wages information concerning this aspect is given. In the mill sector, deskilling has not occurred. On the contrary, functions have been lumped together. A more important point is that women have not had access to new skills currently being introduced when machines are replaced. In the handloom and powerloom sector, no such process is occurring.

Sixth, marginalization of women by function is occurring in the mill sector, as women are being relegated from two functions to one lesser-paid function, which is also being slowly replaced by the other to which they are losing access. Again, the expectation is that a similar process could occur in the powerloom sector if rationalization were also to begin. In the handloom sector, this process is not apt to occur.

Seventh, casualization of work for both men and women can be said to be occurring between sectors in the sense that employment in the mill sector is stagnating and expanding in the powerloom sector. This would mean positive effects on the number of women able to find employment; however, it means a deterioration for women and men in terms of job security and wage levels. This process is not occurring in the handloom sector.

The third question posed concerns the effects of productive work on women's social autonomy. The outer limits of the variation in social autonomy are set mainly by existing family structure and religious beliefs. Only against this background can variation in autonomy by type of labour participation be compared; such participation does not lead to revolutionary changes, but increases the margins of choice for women. Of such factors, the main influences on women's social autonomy were jati (Naidus practicing less seclusion than Chettiars), marital status of women (married women having more autonomy than unmarried women), and the extent of daily housework carried out by the woman worker (the heavier her workload the less autonomy she had).

Several characteristics of woman's productive work have an effect on their social autonomy. The first one is participation in wage labour as compared to unpaid family labour. The fact that a woman earns a cash income makes a large difference in her autonomy, regardless of how the money is spent afterwards. Secondly, the larger the number of functions to which women have access, the more favorably their social autonomy is influenced. Thirdly, a positive correlation was found between the access of women to functions with higher wage levels and their degree of social autonomy. Fourthly, the greater the segregation of men and women in different functions, the more negatively women's autonomy is influenced. Fifthly, mobilization of women in trade unions, and the extent to which they participate actively, show no clear correlation with social autonomy.

Footnotes to Chapter 4.

(1) A number of references in the text have no page numbers. When carrying out research, reports were consulted and notes taken without page numbers. As these reports are not available in the Netherlands, page numbers remain omitted.

(2) The answers to this question will be based mainly on statistics collected at the national level. However, as most figures for the decentralized sector are estimated at that level, they have been compared with local results from Coimbatore to check on their consistency.

(3) Calculated from Handbook of Statistics on the Cotton Textile Industry, 1980, ICMF.

(4) As most of the civil deliveries of yarn come from the southern mills, the national figures have been used as an approximation of the situation in the south.

(5) Respectively, 73 and 72% for 20's counts, 96 and 105% for 40's counts.

(6) Recently, the DMK party set up a union in Coimbatore, which promptly split up along the same lines as the DMK itself.

(7) Calculated from several producers who buy their own yarn.

(8) From 1961 to 1971 the number of people working in the Tamil Nadu powerloom sector increased by 415 % overall; 648 % among men and 181 % among women. For women this increase occurred despite the reduction of women workers enumerated due to definition changes between the two Censuses.

(9) As many of the women working in this sector are unmarried, a comparison of the previous generation within the in-laws'family did not produce much result.

(10) By extrapolating trends in women's participation rate backward from 1971-1981 (years for which figures are available), the calculated rate in 1961 would be around 25%. Given the actual figure of 19%, it was deduced that in the years before 1971 a break occurred downward in women's participation rate. A similar trend break occurred in Bombay in 1931 (Morris, 1965: 218).

(11) Figures for 1981 are based on fourteen workload agreements currently in use with individual mills, agreed in 1980-81.

(12) Indian Labour Journal, vol. 21, 1980; figures given are for Coimbatore and Madras.

(13) Comparing workloads between functions is extremely difficult to do, because the criterion on which a particular workload is based varies by function. For spinning it is the number of 'sides' the spinner has to work: for blow-room and mixing, work is counted in bales of cotton

processed per month, and for women in the reeling department it is a certain number of doffs they must work, coupled with a certain amount of production. The amount of production varies according to the counts and type of yarn (cotton or man-made) used. Therefore, it is not really possible to compare the weight of the workload between men and women in different functions. Again, over time there is only some information from the women workers about the change in workloads.

(14) In Appendix C. twenty-one functions are given; however, doffing boys, bobbin carriers, and sweepers were not counted for this calculation, as these are 'helper functions', not direct 'production' functions.

(15) Calculated from sample of women mill workers in Coimbatore.

(16) Unfortunately, it was impossible to trace from which unions the suggestion for the demand had come.

(17) My thanks to Dirk Hoftijzer for calculating this trend from the existing data.

(18) Interestingly enough, Morris (1965: 66) has found the same trend in the Bombay mills. There the percentage of women workers remained fairly steady from 1882-1930, but started declining rapidly after 1931. Again this is accompanied by an increasing trend in absolute levels of men's employment, and a decreasing trend in absolute levels of women's employment. He does not give an explanation for this trend directly; however, from his study it is clear that in that period, the profits of the mills which had been quite high in the previous period, declined drastically, which led mills to start rationalizing their production from 1931 onwards.

(19) This is borne out indirectly for the mill as a whole by the figures given by SITRA (1979) for the southern mills, showing that from 1972 to 1979 the use of labour in the second shift increased by 15%, and in the third shift by 29%.

(20) This would also seem a likely explanation for the trend that Morris finds in the Bombay mills, which, as he describes, were not interested in rationalizing production by working in several shifts before 1931 when profits decreased drastically. In addition, they could not, as electricity in the mills was only introduced around that time.

(21) Empirical determination of women's 'class' at the household level is a difficult matter. As Roldan and Beneria (1987: 76) rightly remark, taking the husband's work as determinant would not be sufficient in the case of women working themselves. For women, two points in time are basically determining for her future as worker. The point at which she breaks off her education determines to a large extent her future choices for productive work. Secondly, in her household of procreation, the level of family income and her own position as worker are reasonable indicators.

(22) Thurston gives one of the most extensive descriptions of the different castes in South India, and the following is based mainly on his description (Thurston, Castes and Tribes of Southern India, 1909).

(23) The correlation between family type and women's ages is .18, and the correlation between family income and family type is .06.

(24) The initial relationship was found to be strongly negative (-.52). However, it was discovered that all unmarried women and widows lived in rural areas, so that marital status was an interfering factor. Taking this factor into account, the correlation then became -.37. Turning the posited relationship around, it became obvious that the influence of marital status was larger than that of location (the relation between autonomy and marital status went from .59 to .48 when location was taken into account).

(25) In the first instance, the correlation was .15, and it then went down to -.02.

(26) The correlation went from .01 to -.25.

(27) Segregation was operationalized as the percentage of women/men on a five-point scale. This implies that 20% women and 80% men in one function come to the same thing as 80% women and 20% men.

(28) For the handloom sector, the correlation was .31, for the powerloom sector .26.

(29) Before doing so, possible differences between the active women and other women in the mill sector were taken into account. The active women have the same length of service as other women, have two working members per family as most of the other women, have had little schooling, and are between 46-55 years old.

## CHAPTER 5. WOMEN'S LABOUR IN THE INDIAN SHRIMP INDUSTRY

This chapter presents the results of the Indian case study on women's labour in the shrimp processing industry. Two questions are raised: the first is what forms of production exist in the shrimp processing industry, and how are they related? the second concerns the changing division of labour between men and women in the different forms of production.

### 5.1. The national shrimp processing industry

The shrimp which form the basis for this industry, come under fishery production. In India this consists of marine and inland fisheries. The marine fishing sector is the most important in volume and value of production as well as number of people working in the sector (UNIDO, 1987: 2). In 1984 60-62% of total production ( 2.8 million metric tonnes) came from marine fishing (UNIDO, 1987: 2-3). The potential for inland fisheries is large, however, and not yet fully utilized.

Aside from the importance of shrimp in total domestic fishing production, India is the world's largest shrimp producer. It has ranked first in quantity for many years (1). It is part of the group of five largest producers, of whom four are located in the Indo-Pacific region (2). For India shrimp is the most important marine species landed, both in volume and value. During 1984, shrimp represented some 11.6% of total marine landings (UNIDO, 1987: 4). Table 5.1. shows the expansion over the years of the shrimp catch in India as given by various sources. The greatest expansion of the industry occurred from 1970 onwards: shrimp catches more than doubled, peaking in 1975. In the late seventies, catches levelled off somewhat, but rose again in the early eighties to around 200 thousand tonnes per year.

There is some regional concentration of shrimp fishing, related to location of breeding grounds. A few figures on the annual catch (1978 - 1979) will illustrate this. Maharashtra produced the largest amount of shrimp in 1978 and 79 (48 and 57%, respectively of the total shrimp catch in India). The second largest contribution came from Kerala, with 25% in 1978 and 17% in 1979. Other geographic areas contributed a significantly smaller catch of shrimp - however, Andhra Pradesh, Tamil Nadu and Gujarat still contributed a certain percentage (some 6-7% each ) (Synopsis, 1979; UNCTAD, 1983: 46). Inland fishery production is also concentrated. The main production occurs in West Bengal, followed by Tamil Nadu, Andhra Pradesh, and Bihar (UNIDO, 1987: 5). Yearly shrimp catches in India are indicated in Table 5.1.

India provides a large market for fish and fishery products, although average per capita consumption is only five kilograms. Inland fishery products are mostly consumed domestically. Of those marine fishery catches consumed domestically - my estimate is that for shrimp this is some 50% (see following paragraphs) - most are consumed in the coastal States (UNIDO, 1987: 5). This is due mainly to lack of adequate infrastructure for marketing and the unfamiliarity of people with the product.

Table 5.1. Yearly shrimp catches in India, in tonnes

| year | 000's tonnes | | year | 000's tonnes | | |
|---|---|---|---|---|---|---|
| | CMFRI | FAO | | CMFRI | FAO | UNIDO |
| 1966 | 91 | | 1975 | 221 | 246 | |
| 1967 | 94 | | 1976 | 191 | 198 | |
| 1968 | 101 | | 1977 | 170 | 233 | |
| 1969 | 106 | | 1978 | 180 | 187 | |
| 1970 | 122 | | 1979 | 176 | 183 | 177 |
| 1971 | 149 | | 1980 | | 250 | 171 |
| 1972 | 164 | 160 | 1981 | | 176 | 145 |
| 1973 | 203 | 207 | 1982 | | | 162 |
| 1974 | 170 | 246 | 1983a | | | 207 |
| | | | 1984b | | | 211 |

Note. In the FAO data base, amounts are recorded by national flag carried by vessel, not by fishing area.
a) provisional
b) estimate

Source: Fisheries and Fishermen, 1979.
Central Marine Fisheries Research Institute, Marine Fisheries Information Series, Technical and Extension Series no. 9, 1979.
FAO, Yearbook of Fishery Statistics, fishery commodities, 1987.
UNIDO (INFOFISH), The Fisheries Industry in Selected Asian Countries, 1987.

Shrimps play an extremely important role in the Indian export scene. Currently marine products are the third largest Indian export commodity, with shrimp making up more than 90% of the value of fish exports. Between 1963 and 1977, the value of shrimp exports increased 40 times. In the following period, between 1976 and 1985, the weight of shrimp exported from India did not increase much, but its value went up substantially from 179,928,000 US$ to 256,220,000 US$ (see Table 5.2.).

India is the world's largest exporter of shrimp. In 1981 it alone accounted for 13.5% of world exports of shrimp. In value, it ranked second after Mexico in 1981. India had a 12.2% share in world value of shrimp exports, whereas Mexico stood at 13.1% (UNIDO, 1987: 20). Japan is the major importer of Indian shrimps.

The figures for shrimp exports indicate that one-fourth of total shrimp weight landings are exported. However, the landing figures indicate the weight of the shrimp when they come out of the sea, whereas the export figures indicate shrimp that have been processed. The main species of shrimp exported is the penaeid, a large tropical variety. When processed - i.e. peeled and headless - they have lost some 40-50% of their weight (personal communication O. Nieuwenhuis). Subtracting this from the amount landed gives an estimate of 50% domestic consumption and 50% exports of the yearly shrimp catch.

Table 5.2. Shrimp exports from India

| | 000's tonnes | in 1000 US$ |
|---|---|---|
| 1976 | 47,952 | 179,928 |
| 1977 | 47,239 | 178,091 |
| 1978 | 51,223 | 218,459 |
| 1979 | 53,511 | 274,447 |
| 1980 | 47,762 | 233,260 |
| 1981 | 54,539 | 287,733 |
| 1982 | 54,625 | 318,468 |
| 1983 | 53,603 | 307,436 |
| 1984 | 55,194 | 289,264 |
| 1985 | 49,540 | 256,220 |

Source: FAO Yearbook of Fishery Statistics, fishery commodities, 1987.

Government policy for the development of fisheries is shared by the Union Government and the States. The former is responsible for the development of fisheries outside territorial waters, and the latter for territorial marine and inland fisheries. Until recently, policy has been geared toward commerical aspects. They include a) mechanizing fishing vessels, b) increasing handling and processing facilities, c) improving quality control, and d) increasing research and extension activities.

The objectives of the Sixth Five-Year Plan (1980-85) included increasing fish production; assessing marine resources and exploiting them through different types of fishing vessels (see following pages); improving processing, storage and transportation, increasing exports, and also improving the lot of fishermen (UNIDO, 1987: 18). The Seventh Five-Year Plan (1985-90) focuses on the deepsea fishing sector, and its potential for development. Exports are also to be encouraged.

Investments in mechanization of fishing and the emphasis on shrimp as a new product have been superimposed on artisanal forms of fishing technology and social organization of fishing villages. As the fishing economy constitutes the channel by which the shrimp processing industry receives its raw materials, I shall very briefly describe its structure here. The description will show that the modern and ultra-modern sectors function primarily as channels for the sale of shrimp, and that, for the markets covered by the artisanal sectors, shrimp remain of secondary importance. In this case study, therefore, the raw materials come mainly from the modern and ultra-modern fishing sectors.

The fishing economy of India consists of three sectors: the artisanal sector, the modern sector, and the ultra-modern sector. In the artisanal sector, over half a million fishermen work in non-mechanized boats, fishing in coastal waters. They are widely dispersed in 1800 villages, and in 1978 produced some 70% of the total marine fish catch in India (Kurien, 1978: 1559). In 1985 working from 154,000 boats they produced some two-thirds of total fish production (Seventh Five-Year Plan, 1985). The catch is distributed by a large number of small distributors, who are often linked socially to the fishing villages (Kurien, 1978: 1559). Young boys pick up remnants of the catch to sell within the village, village women buy headloads of fish to sell in local markets, and bicycle-riding men distribute loads of fish to markets slightly further away (Nieuwenhuis, 1983: 73).

The modern sector has developed since Independence, and again consists mainly of traditional fishermen using small mechanised boats - 65 to 70 thousand fishermen and 11 to 12 thousand boats (Kurien, 1978: 1559). By 1985 this number had increased to 20,000 mechanized boats (Seventh Five-Year Plan, 1985). Somewhat more than a quarter of all fish are caught in this sector. The landing areas are more restricted (250 centres), and marketing is done by relatively large merchants who transport the fish by railway and lorry to urban centres and consumers.

The ultra-modern sector consists of a small number of big investors (both Indian and foreign), operating from a limited number of large harbors. Investment is made in trawlers with a highly developed fishing technology; prawns and other export-oriented products are the primary catch. Processing is done in units owned by the same group of people, who also operate as exporters to foreign markets (Kurien, 1978: 1562). The shrimp are exported mainly to Japan and the US. Although they produce only 1% of all fish caught, their fishing is geared towards the product with the highest value added (7th Five-Year Plan).

Although these three sectors can be distinguished, this does not mean that they function separately. They are linked particularly through marketing channels. The marketing structure at any landing place and its forward linkages to wholesalers and processors depends on the species landed, the accessibility of the seashore, numbers and types of buyers, the mode of selling, socio-religious customs, and the proximity of the ultimate market. When the catches brought to shore are small, a small-scale distribution system is activated, consisting of men carrying the catch on cycles and women carrying several kilograms on their heads. In larger centers, large catches are transported by lorry. Sales are made through bargaining (when buyers are few in number and exercise a degree of monoposony) or auctioning, which occurs when there are numerous buyers and supplies fluctuate. Buyers include women and men distributors by headloads, men using cycles, wholesale merchants using lorries, and purchasing agents of exporters. The larger the buyer, the larger the amount bought and the further the market distance (Kurien and Willmann, 1982: 38-39).

The number of production units in the shrimp processing industry (i.e. freezing plants and peeling sheds) is not available in figures for India as a whole. However, a number of estimates are available for the various regions. In Kerala, in 1981-82 there were an estimated 150 processing plants (i.e. canning and freezing units), and 1100 peeling sheds (Mathew, 1983: 15). In the Bombay area, there were thirty-five processing plants (freezing plants), and an unspecified number of peeling sheds (Desai and Gopalan, 1983: 37).

National employment figures for the shrimp processing industry are also lacking. This is not surprising, given the fact that the industry is a seasonal one, and fluctuations in employment levels must be continuous. In addition, the most labour-intensive activities fall outside the organized sector and thus are not counted in the national statistics. However, in Kerala estimates from 1981-82 indicate that some 25,000 women worked in peeling sheds; some 2000 men and women worked in the freezing plants, which are part of the organized sector (Mathew, 1983: 15). Desai estimates that women constitute some 70 to 80% of all workers in this industry (Desai and Gopalan, 1983: 37).

## 5.2. Forms of production in the shrimp processing industry

### 5.2.1. Firm structure

In this section, the types of production units prevalent in the shrimp processing industry are discussed. There are basically three types of firms: the fully integrated firm, the partially integrated firm and the non-integrated firm. The question to be answered here is: what are the characteristics of the different types of production firms, and how are they connected (3)?

Valsala distinguishes three types of firms, based on the degree of integration of the parts of the production process. In his classification, the fully integrated firm includes all three stages of production (fishing, pre-processing, and processing). The partially integrated firm undertakes pre-processing and processing, while the 'non-integrated' firm carries out only the final processing. This implies that for the second and third types of firms it is necessary to examine both forward and backward linkages in order to understand fully why the total production process is carried as it is. A limitation of the following discussion is that it is based mainly on data from Valsala's study, which concerns only the situation in Kerala. The data apply either to all exporters from Kerala, or to the two partially integrated firms which he studied in greater detail. Where possible, additional data from the other regions is given.

Before giving this description, it is necessary to describe briefly the different operations involved in the three stages of shrimp processing (Valsala, 1977: 3). First is the primary production, i.e. the actual fishing for shrimp. Second is the pre-processing stage, which includes peeling, cleaning and grading of the shrimp. Finally, the processing itself includes the freezing of the shrimp. Transportation between stages is also part of the processing. The major stages of processing are, however, peeling and freezing, and in the various case studies of women's labour in this sector emphasis has usually been put on these two activities.

The first aspect to be considered for the different types of firms concerns ownership patterns. These vary a great deal among the different types of firms. Owners are categorized as producers/exporters of various types. In addition to producers/exporters, Valsala also mentions merchants/exporters. However, in 1969-1974 the share of merchant exporters in Kerala - the most important state in the export of shrimp in the period covered was very small in comparison to that of producers/exporters (Valsala, 1977: 10). From 1969 to 1974 their share declined from 9% of all Kerala exporters to 4% (derived from figures from the Marine Products Export Authorities). This category of merchants/exporters is not considered further in this study.

Within the producer/exporter category, Valsala makes a further distinction between small, medium and large exporters, based on the level of annual export earnings (4). Small exporters earn 20 lakh rupees or less, medium exporters between 20 lakh to 1 crore rupees, and large exporters one crore rupees or more. For India as a whole in 1969-1974, small exporters were predominant among exporters in numbers. However, the number of medium and large exporters is increasing as shown in Table 5.3.

Table 5.3. Total number marine product exporters in 1969 and 1974 in Kerala

| category of exporter | 1969 | 1974 |
|---|---|---|
| small | 62 | 106 |
| medium | 23 | 41 |
| large | 8 | 6 |

Note. This table includes exporters of all marine products. However, in 1981-82, exported shrimp represented 74% of the total quantity of exported marine products, and 87% of total value of marine products exports. The concentration in Kerala is presumably even higher, as this is the major processing area in India (6). Therefore, this table is used here as toto pro pars.

Source: Valsala, 1977; original data collected from Marine Products Export Development Authority in Cochin.

The backgrounds of such producers/exporters vary considerably, and are related to the size of the processing firm. In the sixties, middlemen and merchants in the fishing regions invested in processing units and geographically more extensive marketing. Because of their links with the fishermen (giving out loans and buying the catch) they had what amounted to a monopsony on the catch. Until the late sixties this category of investor largely processed the prawn catches. They are most likely to fall within the category of small producer/exporter.

In the sixties a new category of investors emerged in the prawn processing industry. These were the corporate limited companies and big 'houses' interested in diversifying their activities. At first they acted as merchants, buying up prawns from other processors and exporting them under their brand name. However, due to conflicts of interest with the older vested traders a degree of vertical integration developed, with the big business houses owning their own trawlers, processing units, and export links to foreign buyers. This group falls mainly in the category of large producers/exporters.

Other types of investors include farmers organized in a cooperative, who sell the shrimp they cultivate collectively in ponds on their own land, and traders/exporters who may hire land for ponds in which to cultivate prawns. Banerjee (1983: 19) states that some of the cultivators go on to establish their own processing units and become exporters as well. Presumably these are small or medium sized investors (see Valsala, 1977: 11).

A second aspect of different types of firms is their cost structure, as ilustrated by investment and operational cost patterns. These are shown in Figure 5.1.

Figure 5.1. Investment and operational costs according to firm type in Kerala

| type of firm | fixed investment | operational costs |
|---|---|---|
| fully integrated | boats | fishing costs |
| | lorries | labour/ fishermen/ drivers/ |
| | peeling shed | peelers/packers/graders |
| | freezing plant | power costs |
| | ice plant | possibly leasing facilities |
| partially integrated | | |
| | peeling shed | shrimp/suppliers |
| | lorries | labour/peeling/packing/ |
| | freezing plant | drivers |
| | | power costs |
| non-integrated | | |
| | freezing plant | shrimp, peeled/suppliers |
| | (or none) | labour/packing |
| | | leasing rates |
| | | power costs, if applicable |

As can be seen from Figure 5.1., in the less integrated firm the relative importance of investment cost in comparison to operational costs is reduced. Unfortunately, very little quantitative data is available on how much each item in fact costs, so that the relative importance of each item for cost reduction is difficult to calculate. The only indications are from the case studies on women's labour. In the Calcutta study, freezing units operating with one lorry, an ice-making plant, a shed, a building, and a generator, are estimated to have invested 150,000 Rs. (37,500 Dfl.) apiece (Banerjee,1983: 22). However, the capacity of such units is not indicated. In Bombay, units with 10-15 tonnes capacity per day must invest between 2 to 9 million Rs.(50,000 - 225,000 Dfl.). A further interesting indication is that investment in freezing machinery constitutes 50-60% of total investment costs. In each of these cases, it is the freezing unit which requires the highest fixed capital investment, because of the advanced machinery used. The peeling part of the process requires very little capital: essentially only a shed and some containers. The cost of lorries has not been included in the available reports. The number of exporters having their own freezing capacity in fact confirms the picture of high cost of freezing facilities. Almost 50% of all exporters do not have their own freezing facilities, but lease or hire them as necessary.

Operational costs are not given in quantitative terms in Valsala's study of the two firms. In the case studies from other regions, they are indicated in different ways, making them difficult to compare. Banerjee (1983: 22) indicates costs per kilogram of shrimp processed for Calcutta: the price for raw materials is 37-45 Rs. per kg, labour costs for peeling are 3 Rs., transport 2 Rs., grading and packing labour costs are 4 Rs., other labour and electricity is 5 Rs. A total of 52-60 Rs. per kilogram is spent for processing. Obviously, raw materials are the largest operational cost factor, whereas labour is only some 10 - 13% of such costs. Desai and Gopalan indicate that in Bombay working capital is only 12-14% of total investment costs (1983: 41). Processing costs per 20 kilogram carton are

some 60 Rupees, of which 30 Rs. are processing costs and 9 Rs. are labour costs. (Other cost factors are not mentioned; purchase of raw materials must be one of them.) Again, it is clear that labour costs are some 10% of total operational costs. This is similar to the Calcutta situation.

Although the data given provides a global indication of the relative importance of various operational costs, there are two additional complicating factors. First, there are different sizes of shrimp, which vary a great deal in price. Valsala indicates that the small partially integrated firm studied buys small shrimp, whereas the large firm buys large shrimp, due to price differences. Secondly, the external relations of firms differ by firm type, and, within each category of firms, by size of firm. He also indicates that the large firm does not give credit to its suppliers but in fact gets credit from these by paying for raw materials after several days, whereas the small firm gives credit to its suppliers by loaning them money to buy shrimp.

### 5.2.2. Production unit structure

The functioning of the production units making up each firm is discussed here. The data pertain mainly to the two firms studied by Valsala in Kerala; the first firm belongs to the category of 'large' firms and the second in that of the 'small' firms. No information is available on the category of medium firms.

Both firms use two types of suppliers of raw materials: middlemen who purchase the shrimp and transport it, and peeling shed contractors, who arrange for the pre-processing to be carried out. The large firm controls both types of suppliers. The middlemen are controlled in the sense that they deliver shrimp to the firm without being extended credit. The firm delays payment by several days, thereby receiving credit from the supplier. The peeling shed contractor receives payment for peeling the shrimp, and is not given credit.

The small firm purchases 'pre-processed' shrimp from its suppliers, occasionally extending credit to them in order to be assured of regular supplies. The sources of shrimp also vary; although both firms purchase mainly within the state, the large firm also purchases from other states.

In principle the two firms do their marketing via the same types of channels. Both export directly and by way of a recognized Export House. However, 39% of the total export earnings of the large firm came from exports through the Export House, and 61% from direct exports. Almost all export earnings of the small firm were from direct exports; a negligible amount were from the Export House (2%) (Valsala, 1977: 28, 37). This means that the advantages to the firm of exporting via Export Houses (5) remain with the large firm.

Market diversification was also greater for the large firm than for the small firm. Whereas the small firm concentrated on one market (the USA), the large firm exported to Japan, the USA, and the UK (Valsala, 1977: 25, 36).

Each firm makes use of (or owns) two types of production units related to the part they play in the production - a freezing plant, and peeling sheds. For each type of unit, the following aspects will be described: the type of machinery used, the types of labour used, the division of labour between men and women, and their respective levels of payment.

The machinery used in the different parts of the production process varies in its degree of capital intensiveness. For the supplier of prawns the main problem is transportation from dockside to peeling unit or peeling/freezing unit. Transportation is usually carried out by lorry. However, this part of the process will not be discussed further, as it is simply an intermediate step between the two types of production units.
In the freezing plant, several types of machinery are used. First, the shrimp must be kept in cold storage. An ice plant, an electrical freezing unit, or a generator-run freezing unit has to make ice blocks in which the shrimp packed for freezing (7). Cardboard boxes are used to pack the shrimp for exporting. The freezing unit is the most capital-intensive part of the process. The large and small firms both use the same types of machinery in the freezing plant. However, the large firm owns its facilities, and rents extra freezing facilities during the peak season, whereas the small firm leases all of its freezing capacity.

The types of labour in the freezing units differ for the large and small firms. In the freezing plant belonging to the large firm, where 79 people work, 72 are permanent salaried staff. Of these, 45 are administrative staff. There are twenty-seven permanent production workers, and seven casual workers. The predominant type of labour used is permanent wage labour. Only 9% casual workers are employed (Valsala, 1977: 30).
In the small firm, employment has been calculated in man-days of employment, making it difficult to compare with the large firm. 64% of all man-days of employment were carried out by production workers, all of them casual labourers. The majority (72% of production workers) are paid on an hourly wages, but piece-rates and payment by the day also exist. This description indicates that casual types of labour relations occur extensively in small firms.
The division of labour between men and women is indicated only for the large firm. Within the administrative staff, women are five out of forty-five staff members (11%). Among permanent production workers, women form 33% of the total. Of the 10% casual workers in the large firm, all are women (Valsala, 1977: 30).
Payment levels also vary widely. In the large firm, payment levels for women administrative staff were on average 52% of the salary men received (men received 236 Rs. per month and women 124 Rs.). The wages for production workers also varied according to labour relation and gender. Among permanent workers, women received on average 79% of male wages (average monthly wages were 165 Rs. for women and 210 Rs. for men). The women casual workers received 126 Rs. on average per month. This converts to 7 and 6 Rs. per day for the different categories of women workers. This may be compared to the small firm, in which the following wage levels obtain: those on daily wages receive 4 Rs./day; those on hourly wages 5 Rs. per day; and those on piece-rates 20 Rs. per day. However, the distribution of men and women among wage earners is not known.

The peeling units show different characteristics. The shrimp supplier acts as middleman between the freezing unit and peeling shed operator. Each supplier deals with a number of peeling shed operators, who supervise the prawn peeling sheds. The shrimp suppliers' activities determine the size and number of peeling units under contract. The large freezing firm gets its shrimp from a 'large' supplier (over 5 million Rs. annual turnover), who deals in several varieties of shrimp, whereas the small firm is supplied by a 'medium' sized supplier (1 to 5 million Rs. annual turnover).

The suppliers give interest-free loans to the peeling shed operators in order to have ensure a regular supply of pre-processed prawns.

Shrimp are peeled manually in a cleaning shed. No machinery is used, aside from a draining board and a vessel for the shrimp. Next they are sorted according to size (grading). This is also done manually, using only containers to hold the shrimp. The fact that no expensive machinery is necessary implies that peeling units can be easily set up and moved to various locations.

In the peeling unit supplying the large firm, the number of workers does not vary by season, but their volume of work changes (Valsala, 1977: 55). In the peak season, there is eight hours work per day, and in the lean season only one hour daily. Therefore, although workers may remain with the same unit throughout the year, this type of labour must still be counted as casual, due to its irregularity in hours and payment levels (as is indicated below). In the small unit, the number of workers hired varies on a daily basis. In the peak season, more than three times as many people are hired as in the lean season. Women make up the majority of workers in both peak and lean seasons. Casual wage labour is also the dominant type of labour in this unit.

The division of labour between men and women in the peeling unit supplying the large firm is very distinct, both in division of functions and in methods of payment. Women do the peeling and grading; men weigh the prawns and load them for transportation. Among production workers, women are the majority: forty out of forty-three workers. In the peak season, workers work eight hours per day, whereas in the lean season they work only one hour per day. In the peeling unit supplying the small firm, women are also in the majority (twenty out of twenty-two workers). They do the peeling and grading, and the men the loading. This implies that the division of labour between men and women is similar in peeling sheds supplying both small and large firms.

Payment methods and wage levels differ between the two types of peeling units. In the large peeling unit, the women are paid piece rates, the rate being 30 paise for one basin of whole prawns (+ 3 kgs.). Average daily earnings for women workers are 7 Rs. per day. The shorter hours of work in the lean season are reflected in lower daily earnings when these are based on piece rates. The male workers received daily rates of 8 Rs. per day. In the smaller unit, all workers are paid on a piece-rate basis, and are hired daily. Average daily earnings for men in the peak season are 20 Rs., and for women 12 Rs.. In the lean season these drop to 1 Rs. for men, and 2.50 Rs. for women. The labour relations for women are less secure than those for men, as women are hired or fired according to workload, whereas men stay year-round.

The following figure summarizes the preceding discussion.

Figure 5.2. Internal and external characteristics by firm type in Indian shrimp processing industry

| Firm type | small firm | medium firm | large firm |
|---|---|---|---|
| raw materials | - pre-processed shrimp from peeling shed contractor | - not in Valsala's study | - middlemen purchase and transport shrimp<br>- peeling shed contractor |
| marketing | - direct | | - direct<br>- Export house |
| product type | - small frozen shrimp | | - large/small frozen shrimp |
| Production units | | | |
| A. Freezing plant | | | |
| technology | - freezers/cold storage leased | | - freezers/cold storage owned |
| types of labour | - short-term wage workers, casual workers | | - permanent wage workers<br>- short-term wage workers |
| division of labour M/W | - unknown | | - women 23% of total workers<br>- in all functions; greatest concentration in casual work |
| payment methods/ levels | - all work on hourly or piece-rate basis | | - hourly wages/ piece-rate wages/<br>- women's average wages significantly lower than men |
| B. Peeling unit | | | |
| suppliers | - medium-size supplier | | - large supplier to several peeling units |
| technology | - none/manual | | - none/manual |
| types of labour | - workers hired daily | | - workers hired daily |
| division of labour M/W | - women peel/grade<br>- men transport shrimp | | - women peel/grade<br>- men transport shrimp |
| payment methods and levels | - piece-rate/daily<br>- women 40% less than men in peak season | | - women piece-rates<br>- men daily rates<br>- similar average wages in peak season |

Source: data derived from Valsala, 1977.

5.2.3. Changes in production structure and technology

In this section the changes occurring in the production structure of the shrimp processing industry are considered more explicitly, as a prelude to examining the effects on women's labour. Here I will discuss three types of changes which have been of importance in understanding developments in the shrimp processing industry; these have overlapped in time, but are considered separately here for analytical clarity.

Two major technical changes have taken place in the production process. In the primary stage, catching fish, the introduction of mechanized fishing trawlers led to an enormous increase in the amount of fish caught. Production of fish doubled in a twenty year period; from 634,000 tonnes in 1950 to 1250 thousand tonnes in 1970. A second major change was in the techniques used for preserving marine products. Before, drying and curing were the main methods of preservation. This has changed to emphasis on freezing fish and prawns. These changes have occurred all over India, where fishing is an important industry (UNIDO, 1987: 9-11).

The technical changes in processing have been introduced from outside the fishing industry. Government support for introduction of far-reaching changes in the fishing industry were meant to develop the traditional sector, and improve the lives of fishermen. The initial push for changes in fishing techniques and processing was given by a Norwegian development project in Kerala (see Kurien, 1978; Galtung, 1980; Gulati, 1984). This project first introduced mechanised boats and initiated the increasing emphasis on export of shrimp.

Secondly, the expansion of the shrimp processing industry has led to changes in ownership patterns as well. New groups of investors entered the industry. Previously, marketing and processing was carried out mainly by individuals or very small groups of people related to the fishermen and boat owners, consisted of drying techniques and was linked to local and export markets. When exports of frozen shrimp became important, merchant middlemen emerged as buffers between those catching the fish and the national and international markets, and gained a monopsonistic grip on fish marketing in India. Another new group of investors has emerged recently - the big Export Houses. These entered the industry because of obligations to diversify and extend their exports incurred as a result of obtaining import licenses under the Import Trade Control Policy.

Thirdly, waves of vertical integration and disintegration occurred within the industry. Kurien (1978: 1559) indicates that vertical integration occurred in the expansionary period, when the big Export Houses entered the shrimp processing industry. They began to invest in fishing boats and processing firms in order to get a better grip on supplies of shrimp for exporting, as the previous group of investors - the merchant/middlemen - often opposed the big houses. For Bombay, Desai and Gopalan (1983: 20) also indicate that vertical integration occurred early in the development of the industry, when profits were very high. In the Calcutta study, there is some indication of vertical integration; there the owners of processing units also try to control the supply of shrimp by breeding them. In Kerala, Valsala's study indicates that a certain amount of vertical integration has existed, but that it was decreasing in the early seventies.

Vertical disintegration or subcontracting is becoming increasingly important currently in the shrimp processing industry. Valsala has demonstrated that the ownership of processing facilities is much less than would be expected, given the yearly turnover of the various firms (80 out of 104 firms do not own proceesing facilities). As the freezing facility is the central production unit in the industry, this suggests an extensive reduction in vertical integration within firms. In addition, the case studies of two firms by Valsala show how the pre-processing stages are subcontracted to production units owned by others.

Desai and Gopalan (1983: 37) indicate that in Bombay vertical disintegration has occurred, particularly in the pre-processing stages. The reasons they give for the failure of vertical integration are a) fixed investment was high and capacity somewhat underutilized, due to the seasonal character of the industry, b) labour costs were relatively high, because the units were large enough to come under the Factories Act: then wage levels were high and social security payments mandatory. In Gujarat, the emergence of the processing industry was relatively recent, and large-scale. In this context, the degree of vertical disintegration has most likely been larger here than in Kerala.

In Kerala, the role of shrimp processing outside the organized sector has existed longer, and is linked to the economy and social structure of fishing villages. The women who peeled shrimps belong to particular fishing communities, and their male relatives are involved in fishing. Nevertheless, Mathew (1983: 15) indicates that in the early seventies, the peeling of shrimp was more extensively transferred to the unorganized sector. Processing plants maintained a regular supply of peeled shrimp via intermediaries subcontracting work.

The main consequence of subcontracting for production units has been that pre-processing is carried out in units which do not come under the term 'factory' or large-scale production. The peeling activities, requiring only baskets and containers, can in principle be carried out almost anywhere. The case study by Gulati (1984: 114) indicates that pre-processing is organized on a more or less daily recruitment basis by a shrimp dealer or supplier, and in varying locations. Mathew (1983: 16) states that peeling is subcontracted out via small shrimp dealers who supply the raw materials to workers at home or working in a small shed. These descriptions imply that this type of unit is basically a 'workshop' or 'domestic outwork', involving casual forms of work. Thus, only the freezing unit can still be included in the organized sector, or large-scale production.

## 5.4. Women workers in the shrimp processing industry

In this section, the nature of women's labour in the shrimp processing industry is examined. First, the personal and family characteristics of the women workers are explored to find out what factors influence their access to employment in the various production units and firms. Secondly, a description of the characteristics of women's labour in the different types of production units is given. Thirdly, the influence of changes in production structure on women's work is discussed (8).

5.4.1. Personal and family characteristics

The women working in the shrimp processing industry are usually fairly young. In Calcutta, 17% of the workers are younger than 15. In Kerala 4% of the workers are younger than fifteen. This group qualifies as child labour. Very young girls tend to be recruited for peeling because they are more docile in performing the fast piece-rate work they are asked to do (Mathew, 1983: 25). In Calcutta and Bombay, similar percentages of young women in the following age groups are recruited (see Table 5.4.). In both Calcutta and Bombay, some half of the women workers are between 21- and 30 years of age. Older workers were encountered more in Bombay than in Calcutta.

The marital status of the women shows great similarity between Calcutta and Bombay. Half the women workers are married, and some thirty percent are unmarried. Almost one-fifth of women workers are either separated or widowed, which implies that at least that number must earn a full income to provide for themselves and others (see Table 5.4.).

The educational level of the women varies quite a bit by region. In the Calcutta area almost 60% of the women are illiterate, whereas in both Kerala and Bombay, this figure is around 30%. In Kerala 40% of the Gulati sample has had some primary education, whereas in Calcutta and Bombay this figure is much lower. The figures for secondary education levels are not completely comparable because the various authors use different cut-off points, but also lie between 20 and 30% of the women interviewed. Table 5.5. gives the figures.

The social background of the women is given in the various studies, but is very difficult to compare, as in one case differences in religions (Hindu, Moslem, Christian) are emphasized, and in other cases caste and tribe differences. In Kerala the women mainly come from lower castes and from Christian backgrounds (75% of the women). According to Mathew, fish processing has a somewhat low status; therefore, women of higher castes will go into it only if impoverished. In Calcutta both Hindus and Moslems work in the industry; a third of the women (mostly the skilled graders) are from Kerala, working there for the season. In Bombay, the casual workers are migrant women from nomadic tribes from Andhra Pradesh and Karnataka. The skilled workers, on the contrary, are from fishing districts in Goa, Maharashtra, and Kerala.

The number of children the women have is not given separately for the women working in the shrimp industry (it is combined with information on women working in other industries). It is therefore difficult to give an indication of the women's household situation. The type of work the husband does is not given separately in either the Bombay or Kerala study. In Calcutta, 50% of the husbands work as agricultural labourers, and 33% as urban workers. No more precise information is given. 'Urban workers' presumably means non-agricultural work. Finally, no other figures are given to indicate whether women have a rural or urban background. However, from the overall description, one can derive that in the Calcutta area most local women are from small villages; the Kerala women are presumably also from fishing villages in Kerala. In Bombay too, the migrant women have rural backgrounds.

Table 5.4. Personal characteristics of women workers in the shrimp industry in Bombay and Calcutta (in %)

| | Calcutta | Bombay |
|---|---|---|
| Age | | |
| < 15 | 17 | n.i. |
| 16 - 20 | 23 | 20 |
| 21 - 30 | 50 | 49 |
| > 30 | 10 | 31 |
| Marital status | | |
| married | 50 | 49 |
| unmarried | 33 | 33 |
| sep/widowed | 17 | 18 |
| Educational level | | |
| illiterate | 57 | 35 |
| partial and completed primary | 27 | 8 |
| partial and completed secondary | 17 | 37 |
| SSC | - | 20 |
| | (N=30) | (N=49) |

Sources: Banerjee, 1983, for Calcutta.
Desai and Gopalan, 1983, for Bombay.

Thus, the following facts emerge from this discussion of women's personal and household characteristics. First, young women in particular are recruited into the shrimp processing industry - the majority of women are under thirty. Secondly, slightly less than half of the women are married. 33% are unmarried, and almost 20% are widowed or separated. This suggests that at least 20% of the women generate essential income for their families. Presumably, it is a substantially larger percentage, as male family members may be sick, absent, or out of a job. Thirdly, the educational level of the women is fairly high in the Bombay area, with more than half having had some or completed secondary education. In Calcutta, the level of illiteracy is much higher. Fourthly, the women are generally from low-status backgrounds, whether Hindu, Moslem or Christian.

These facts suggest that, although there are regional variations in personal and family characteristics of women workers, these differences are not extreme among the women involved in the industry. This means that it becomes more important to discover what types of work women find within this industry, and how changes in production structures affect the industry and them.

## 5.4.2. Gender division of labour

Having taken the personal and family characteristics of the women workers into account as factors playing an important role in gaining access to employment, the gender division of labour within the two types of production units (freezing plant and peeling shed) will be considered (9). Only women working in various forms of paid labour are taken into account in these studies. Women working as unpaid family workers were not included. The following aspects are taken into consideration: recruitment, division of functions between men and women, workloads and wages, skills, labour mobility, and mobilization. Subsequently, changes in the gender division of labour are related to changes in the industry.

### Recruitment

The way that women are recruited into the industry varies by the type of job. Freezing units have relatively stable and organized labour recruitment patterns. In the Bombay area, most of these units come under the Factories Act. Women graders are mainly hired as temporary wage workers. This means they have a contract for the season (some 8 - 10 months a year), with a possibility of renewing the contract the following year. 84% of the women were temporary wage workers. However, some women remain with the same unit up to ten years (Desai and Gopalan, 1983: 54). In the Bombay sample, the graders have the highest level of job security found in this industry.

Access to a grader's job in Kerala is not easy. Because the factory job has some protection in terms of wage levels and fringe benefits, it is difficult to acquire without personal connections. The women are recruited by a contractor for the whole season, and receive a number of fringe benefits. In Calcutta, graders were mainly women recruited from Kerala. They were hired for the whole season (10), and recruited via a labour contractor. In this situation the women are taken on under relatively favorable working conditions; the study implies that such a system works in favor of regular wages and fringe benefits because a whole group is recruited under similar circumstances ( Banerjee, 1983: 26). This system seems to be more general; it is also mentioned for Gujarat (ISST, 1984: 3). Contractors have responsibility for getting women to the units from Kerala, providing facilities and paying them, and controlling their work.

In the freezing plant, a third type of worker is the shrimp packer. These are usually men workers recruited on a daily basis at the factory gate, and come under the category of short-term wage workers. In Bombay, an apprenticeship system for women workers is mentioned, whereby peelers and graders have 'assistents' who are still learning the job. However, it is not described, and its prevalence is not indicated.

Other categories of women workers include 'casual workers', who are defined as being recruited for up to six months per year (12% of the women in the Bombay area). They are considered a reserve labour force (Desai and Gopalan, 1983: 54). The 'seasonal workers' are those who are employed for a maximum of three months. In the Bombay study, they were 4% of the women in the sample. It is not quite clear whether these categories of women worked in the freezing plants or in the peeling sheds.

In the peeling units, the prawn suppliers or peeling shed operators organize labour recruitment. This can be done in two ways. The dealer/operator can make use of family labour, also including other women and children as peelers, or (s)he can make use of hired wage labour,

working on a piece-rate basis. Those hired are usually women or young girls hired on a daily basis, as and when prawns arrive from the harbour. In Bombay, groups of women from the same caste were found to negotiate as a group with the peeling shed contractors for daily employment (Desai and Gopalan, 1983: 40). Women can change units daily, depending on the wage rates offered. Gulati states that personal connections are important in getting piece-rate work in the peeling sheds in Kerala, because recruitment is done informally. In Calcutta, peelers (local women) are recruited by the owner of the shed, presumably on their own application.

The labour relations of the peeling unit as a whole with the freezing unit are those of a dependent unit, i.e., it is dependent on the freezing unit for the marketing of the processed goods. Tom (1987: 10-11) calls this the 'external' labour relations, and the first two categories 'internal labour relations'. The internal relations are relevant in describing the existing labour relations in which women work, but the external relations indicate the directions of possible change. What this implies is indicated by a Kerala woman prawn dealer;

> 'firms usually pay for the prawns they buy from the middlemen like myself on the following day or even later. Immediately on sale, all that I get is a voucher stating the quantity and grade of the material and the price the firm will pay. So, the first thing I have to do when I set out for work is to call at the office of the firm concerned, and get my money' (Gulati, 1984: 113).

The whole range of casual work is found in the shrimp processing industry: in the freezing units, there is short-term wage work, and, in the peeling units, short-term wage work, dependent work, and unpaid family labour. However, within this one category of 'short-term wage work', there are clear differences in the degree of 'shortness' of the labour relationship which are fairly essential in terms of survival, if not in groves of Academe.

Division of functions

Women are located in all parts of the industry. In the freezing unit, women carry out both grading and packing. Grading is an important function in the industry, and is the only function recognized as skilled. Men do the loading of the cases, clean the plant, and function as supervisors. In the Bombay area, all supervisors were men.

The peeling process is the most labour intensive part of production, and peelers are almost always women. In Kerala they are all women, and in Calcutta mainly women (because traditionally peeling has been women's work at home). Men are loaders and peeling shed contractors. The latter function is that of an intermediary between the freezing unit and peeling shed. In Kerala, women are also peeling shed contractors. Gulati (1984: 112-114) describes the activities of one woman contractor. The fairly strict division of functions indicates that there is almost total segregation of men and women by functions.

## Skills

Within the industry, almost no tasks are acknowledged as skilled. Only grading, which is industry specific, is acknowledged as such. In the Bombay study the authors state that a number of workers are first taken on as trainees; 70% of the women said that they had in fact learned new skills on the job. Once these skills have been learned, however, 80% of the women remain in the same function. The on-the-job training involves learning by doing. Women workers in Bombay stated that two to three months training was sufficient for proficiency, but owners/managers required eight months.

The majority of women workers taken on as graders for a season, are experienced workers. They are usually women related to a fishing community from Kerala, who have acquired their skills there in previous years. Particularly in the seventies, the processing industry first expanded, and then contracted in Kerala, leaving scores of experienced workers without jobs. These women now work in other fish processing centres in India. In Calcutta, employers preferred to recruit Kerala women as experienced graders. In Gujarat, local women have only recently been allowed to do grading work together with Kerala women (ISST, 1984: 4).

In the freezing unit, men carry out jobs that are considered unskilled, such as operating the freezing machinery and working as loaders and cleaners. The only man's job which is considered skilled is packing (Desai and Gopalan, 1983: 52).

Peeling, the major function in the peeling sheds, is considered unskilled. One can make a case that peeling in fact builds on skills acquired within the household. This is the case in the Calcutta area, and also in Kerala. However, as the issue here is acknowledged skills and changes, these will be considered.

The contents of the work and level of skills do not seem to be changing much. There is no collapsing of functions and simplification of work content as such. What is changing is the context in which the work is carried out. But this will be discussed below under the 'casualization of work'.

## Workloads and wages

The shrimp processing industry is a seasonal one, whether shrimp are caught in marine fishing or from inland ponds. In the former case, the season lasts between eight and ten months, in the latter around six months. This implies a certain irregularity in workloads and wages. However, the degree to which workers experience these fluctuations depends very much on their functions and the work contracts they have been able to negotiate with employers.

The type of contract women workers receive varies in degree of security. Graders have the most secure type, good for the whole season, regardless of the amount of shrimp delivered to the freezing plant. This applies to the Bombay and Calcutta areas. In the Calcutta area, this type of contract is obtained by a contractor for the whole group of women he recruits (from Kerala). It also includes fringe benefits: travel expenses and free accommodation, and social security payments (Banerjee, 1983: 26).

Only an indication of graders' workloads can be given, due to irregularity. In Bombay, the average number of hours worked per day is 8.3 (Desai and Gopalan, 1983: 117). However, in the peak season twelve to fourteen-hour working days and a seven day week are common (Desai and Gopalan, 1983: 60). In the Calcutta study, workloads for graders are not indicated.

In the peeling sheds, women peelers are recruited on a daily basis, with piece-rate payments. They generally are employed between ten to fifteen days per month (Desai and Gopalan, 1983: 40). Each day they generally work five or six hours (Desai and Gopalan, 1983: 60). In the Calcutta study Banerjee indicates that working in the shrimp industry is combined by local women with agricultural work (processing), since the seasons are complementary. Women peelers and packers are recruited on the same daily basis and paid daily wages (Banerjee, 1983: 24). Peelers usually obtain approximately ten days work per month. The daily process of getting work as a peeler is described by a Kerala village woman:

> 'There are always a number of women young and old, wanting to work as sorters (at the jetty). In fact, there are too many of them, so the jetty staff have to shoo the extra ones away. ...At the end of the day, the lucky ones may have made as much as five rupees, but most do not make more than four rupees.'(Gulati, 1984: 114).

In the Kerala study, the number of days women work and the extent of their overtime are both given in Table 5.5. These figures indicate that a third of the women in the industry regularly work overtime. Unfortunately, these figures were not disaggregated by function. Together these figures indicate that women experience daily overtime work, in combination with a degree of underemployment.

Table 5.5. Regularity of work in days and hours/day in Kerala shrimp industry

A. Number of days worked in Kerala

| No. of days worked | % women workers |
|---|---|
| up to 100 days | 18 |
| 101 - 150 days | 22 |
| 151 - 200 days | 22 |
| 201 - 250 days | 32 |
| 251 - 300 days | 6 |
| | (N=100) |

B. Number of hours worked in Bombay

| hours/day | % women workers |
|---|---|
| <8 | 39 |
| 8-9 | 14 |
| >9 | 45 |
| | (N=49) |

Source: Mathew, 1983; Desai and Gopalan, 1983.

The method and level of payment for workers vary widely. Wage levels for graders are higher than for any other women's job in the industry. In Bombay, wages averaged between 300 - 500 Rs. per month for graders in registered units (Desai and Gopalan, 1983: 40). In Calcutta, they also received a monthly salary of 500 Rs. In the freezing unit, male cleaners and loaders earned around 500 Rs. per month (Desai and Gopalan, 1983: 57). In the Calcutta area, men in these functions earned 400 Rs. per month or more. Electricians earned 750 Rs. per month. Both the level of wages, and the fact that payments are made monthly rather than daily, indicate greater job security for most workers in the freezing units. However, it is clear that only skilled women workers reach the wage levels and monthly payments of unskilled men workers.

Banerjee discusses the differences in payment systems for men and women in the freezing units, indicating that all men there were paid monthly wages, including those carrying out unskilled work (packing and transporting). Women on the other hand, were paid piece-rates, and on a daily or weekly basis. She interprets these differences as the result of different bargaining potential of men and women in the local labour market; men have alternatives which pay as much as they would receive in the shrimp processing industry. The women have fewer alternatives because social restraints (purdah) limit the extent of their labour market participation.

In the peeling units, women are paid piece-rates on a daily basis. In Bombay, women were paid 30 - 40 Rs. per tub of peeled shrimp. Women peelers could earn as much as 20 Rs. per day. However, they had no more than 10 - 15 days work per month, so their average monthly salary in season would be between 200 and 300 Rs. per month. In Calcutta, wages are lower. Women earn 2.50 Rs. per kilogram, and average 12 Rs. per day. Given only ten days work per month, they earn on average 120 Rs. per month in season. Banerjee indicates that men working in peeling sheds get monthly payments of 300 Rs. for the entire season (1983: 23). In Kerala, women peelers can borrow money in the lean periods from the prawn dealer. These carry no interest, but an obligation to peel for the lender as and when required (Gulati, 1984: 114).

More general figures are given for the distribution of wage levels among women workers by Desai and Gopalan for Bombay, and Mathew for Kerala. Unfortunately, these are not split up by function. In Kerala, Mathew indicates that 86% of the women are paid piece-rates, 6% are paid monthly rates, and 3% daily flat rates. The level of payment is some 5 Rs. per day; this is not further sub-divided by function. In the Bombay study, Desai indicates that 35% of the women are paid on a daily basis, 59% on a monthly basis, and 6% on a piece-rate basis. The level of payment is not bad;
Table 5.6. gives the distribution.

Table 5.6. Payment levels for women in the Bombay shrimp industry

| Rs/day | % of women workers |
|---|---|
| 1 - 6 | 14% |
| 7 - 9 | 8 |
| 10 - 12 | 21 |
| > 12 | 57 |
| | (N= 49) |

Source: Desai and Gopalan, 1983.

Comparisons can be made to the wage levels received in other industries. One author states that incomes in the fish processing industry are higher than those for women in agriculture (Banerjee, 1983: 28), and another finds this to be true in comparison to the fruit and vegetable processing industry (Desai and Gopalan, 1983: 55). These are reasonable comparisons, because they compare the current situation of the women to other locally available employment opportunities.

Are women recruited as a cheap labour reserve within the industry? This hypothesis is true to some degree. First, as far as can be deduced from the various case studies, women are not recruited because of a shortage of men workers for the industry. Rather, the type of work they do is related to activities which can be considered extensions of previous household tasks. Secondly, they are recruited for the irregular work in the industry, but so are men. Thirdly, they are recruited for the most labour-intensive parts of the production process in the industry. Men are far more predominant in the supervisory functions and in loading, factory cleaning and transport. Therefore, one can say that women are used as an existing cheap labour reserve throughout the industry.

Labour mobility

There is a basic instability in this industry which is related to its seasonal character and the fact that the supply of shrimp cannot be completely regulated but is dependent on natural circumstances. Given this starting point, the relative stability and turnover of the various functions within the industry are examined.

In the freezing units, there is a certain degree of labour mobility among women graders. In Bombay, such units are concentrated in two geographic areas, which makes it easy for workers to exchange information. 60% of the women workers surveyed had at some time been forced to change jobs, due to seasonal employment. Another 22% of women graders had changed units in search of better terms of work (Desai and Gopalan, 1983: 58). 50 to 60% of all women had worked in the same establishment for five to ten years. The authors suggest that management is currently changing its recruitment policy to include more workers who are young and more highly educated.

In the Kerala study it is indicated that the existence of too many units and workers led to high competition and underemployment of workers. In addition, seasonal fluctuations in the supply of raw materials led to problems in the daily level of employment. Given that the security of graders' jobs in their home state has deteriorated, Kerala women often prefer to work in other areas - such as the Calcutta area - because of the relative security of a job for the whole season.

For women peelers, horizontal labour mobility is inherent in their job. In Bombay, women peelers may even change the unit where they work on a daily basis. However, this is more a necessity than a positive aspect of their job, as they are not certain to find work (Desai and Gopalan, 1983: 58). For the Bombay area, alternative job opportunities are not discussed by these authors.

In Calcutta, women peelers are attracted from groups with few alternative job possibilities. These include Moslems, who are not allowed to work in agriculture outside the house (Banerjee, 1983: 28). Non-Moslem women peelers also have few other possibilities for work in the prawn season, as prawns are harvested during the lean season for agriculture. All women peelers have to find work on a daily basis.

Mobilization

The degree of trade union organization in the shrimp processing industry is very low. In Kerala (one of the states with a generally high degree of unionization) 97% of the women interviewed were not members of trade unions. 38% thought there was need for a union, but almost equal numbers said there was no need or gave no answer (Mathew, 1983: Annexe). In Calcutta, Banerjee states that trade union organization began up in a few large production units. The immediate reaction by management was to dismantle the units and start production in rural areas, on a smaller scale. Employers saw the activity of women graders as a potential focal point for their mobilization. This was an important reason for recruiting Kerala women as a group, and keeping them isolated from other workers and trade union organizers (Banerjee, 1983: 26).

In Bombay, there have been more efforts to organize workers. 25% of the women mentioned attempts to form trade unions, which were thwarted by management. 75% of the women said no attempts had been made. In giving their opinion, 35% of the women thought it would be useful to have a trade union, but almost half said they would not join it. Their assessment was that previous attempts had led to short-term gains and long-term 'disorganization' of work by mangement.

There is very little discussion on the theme of solidarity between men and women workers. From the point of view of the women workers, unions were felt to be 'men's business' and as workers in small-scale units they felt themselves to be no match for management (in the Bombay study). The women felt that unions catered to male workers and workers in large production units, who are more easily organized. This bias leaves out women workers, particularly those working in small-scale units and domestic outwork. In Kerala a question was asked concerning who brought up issues concerning women in the unions - a question no one was able to answer.

The issues that women workers felt strongly about as evinced by the Bombay study, were 1) wage levels, 2) payment systems, 3) wage deductions, 4) paid leave/holidays. There is little evidence that women address other issues related to their home situation in their negotiations with management.

There is almost no evidence in the case studies indicating to whom action is directed when it is undertaken by women workers. Only in the Bombay study had an appreciable fraction (30%) of the women made direct demands to the management concerning wages. This was felt to be the primary issue; other aspects of working conditions were felt to be secondary. However, the Bombay study also indicated that women workers rebelled at work in an informal way, by taking long breaks and doing their work slowly.

5.4.3. Changes in the gender division of labour

In this sub-section, the following possible changes in the gender division of labour are discussed; substitution, de-skilling, marginalization, and casualization of employer-employee relations.

The first question is whether men are substituted for women workers. There seems to be a fairly strong gender connotation which works in women's favor, in the sense that shrimp processing is traditionally seen to be the work of women, so that they have access to most functions in the industry. The Calcutta study indicates that women do peeling because of its association with the traditional cleaning of prawns within the household.

This is in contrast to the cleaning of other types of fish, which is normally done by men. A more indirect gender connotation is suggested in the Bombay study, where those functions associated with work traditionally carried out in the household are considered unskilled, whereas industry-specific functions are considered skilled.

The gender connotation is reflected in the degree of gender-segregation among the functions within the industry. Only women and children are peelers; no men work in this function. In Calcutta and Bombay the majority of graders are also women. In Kerala, Mathew states that an insignificant number of women work at grading. Men are mainly packers, loaders and unloaders, electricians, and supervisors.

Generally, there is little substitution of men for women workers, and almost total segregation by function remains. Banerjee (1983: 25-26) does indicate that Kerala women graders travel to other shrimp fishing areas, where they tend to substitute for local women workers. This is a type of substitution which must be kept in mind. Banerjee remarks that women workers in grading will retain their jobs only as long as method and tools do not change, suggesting that technological changes may lead to substitution.

Women largely experience neither de- nor re-skilling in their jobs. The number of skills acknowledged is very low; only graders are seen by employers as doing skilled work. In the Bombay area, some women can acquire this skill by working as apprentices with experienced graders. There does not seem to be much change in work content or level of skills in the various functions carried out by women. Therefore, de-skilling is currently not taking place; a certain number of women can acquire training in the industry.

The marginalization of women in the industry would imply that women have a) access to fewer functions than before, b) there is less job security than before, and c) they have access only to lesser-paid functions. To discuss such changes properly, the existing degree of stability and turnover in labour in the industry must be outlined to give a point of comparison.

There is no indication that the number of functions women perform are decreasing. Nor is there evidence that the percentage of women in each function is decreasing. Women mainly have access to lower-paying functions - as peelers - and only certain groups of experienced women have access to higher paying functions as graders. The job security indicated previously does not appear to be increasing but is remaining stable. Therefore, one can conclude that women are currently not being marginalized.

Women's work in the shrimp processing industry is being 'casualized' on an extensive scale, judging by the fact that all case study authors describe this process (calling it 'informalization'). Peeling, which previously was done in the same workplace as grading and freezing, is now being subcontracted to separate units through intermediaries. Mathew states that in Kerala peeling now takes place within 'home-scale' units via intermediary agents. She has determined that basically the work is carried out in the same manner as previously occurred in large-scale units. However, the effects on working conditions are clear: 1) wages have been depressed because workers no longer come under factory legislation, 2) owners and exporters receive more profit, and 3) no minimum wages or fringe benefits are paid anymore (Mathew, 1983: 15-16). A similar

process has occurred in Bombay and Calcutta. The peeling or pre-processing part of the production process is subcontracted through intermediaries who are suppliers to the factory.

First, what has this meant for the extent of women's participation in the internal (within the central production unit) and external (outside the central production unit) labour force? Peeling is the most labour-intensive part of the production process, and all peelers are women. This implies that subcontracting of this part of the work affects a relatively large portion of the women workers in this industry. Precise percentages of women workers affected are difficult to give, as they are hardly mentioned in the case studies. In the Calcutta study, the ratio of peelers to graders is given as 8:5.

Secondly, how has casualization influenced the type of labour relation women have? According to the Bromley and Gerry continuum (1979), both peelers and graders are short-term wage workers, although there are differences between those hired for a whole season, for the peak season, and on a daily basis. However, as indicated in the Bombay study, distinctions are made between 'temporary' workers (hired for 8-10 months at a time), 'casual' workers (hired for up to six months), seasonal workers (hired up to three months), and workers hired daily. These differences in the degree of daily job security are important for an analysis because job security is an important criterion for promoting certain kinds of work more than others. The 'shortness' of the term determines the extent to which a worker can earn a livelihood from such work; in my view, it should be more explicitly used as a criterion for measuring the degree of casualness of work relationships.

The differences in labour relations of unskilled and skilled women workers are based on 1) skill differentials, 2) relative scarcity of such skills, and 3) recruitment methods (group versus individual). The differences between unskilled men and women workers are related to 1) level and security of wages, and b) workload: daily overtime and seasonal underemployment. It would be useful therefore to further develop the existing continuum taking into account not only the directness of the employer/employee relationship, but also the role of skills in determining worker bargaining power.

Thirdly, how has casualization influenced the extent to which women have control over the amount of work they do? Inherently, women have very little control over the amount of work they receive, because of the irregularity in the supply of raw materials. This leads on the one hand to some days with little or no work, and some on which many hours of overtime are necessary. In Bombay 44% of the women work more than three hours overtime per day in the high season. In Kerala 20% of the women work more than eight hours per day. Data from Calcutta are lacking. Desai and Gopalan suggest that irregularity of supply during the day also has positive effects, as it breaks the tedium of the work. This is seen as positive by the workers because the supervision of graders during processing is quite close (workers are expected to stay on schedule, work overtime, not take breaks, and not talk among themselves).

Mathew (1983: 16) emphasizes the situation of the peelers, which is quite different. There the direct control by management of the freezing unit is subcontracted to the shrimp supplier who organizes the peeling shed. Workers lose control over their work by the deliberate casualization of the employer/employee relationship. The competition among workers to get

work and the use made of this divisive element by middlemen distributing work, makes it much more difficult to retain control over the amount of work done.

Fourthly, to what extent can women control the level of their wages? Graders can exercise a degree of control because the shrimp is quite perishable and their skills are crucial in determining its quality, and they can negotiate as a group.

For peelers, it is very difficult to have any control over wage levels because a) they are hired on a daily wage basis, b) there are few other work alternatives (in Kerala and Calcutta) that are acceptable to women, c) there is a high degree of competition among peeling units, such that unit prices are lowered, and d) externalizing the work removes the relative protection which labour legislation gives large-scale unit production.

How do payment methods change? Desai gives the most extensive details concerning the methods of payment for peelers who become part of the external labour force. Subcontracting has two forms, for which payment methods differ. A middleman may supply women and children with shrimp to peel on a piece-rate basis; or a woman prawn dealer may buy part of a catch and peel them with the help of unpaid family labour and labour hired on a piece-rate basis as well. On the other hand, when they continue to work as daily hired labourers in the freezing unit, they receive daily wages based on piece-rates.

The role of the middleman - the prawn dealer, who supplies the freezing unit with partly processed prawns - is important. They recruit women workers, pay their daily piece-rate wages, and according to Gulati, also advance women peelers small loans. It is not quite clear from the various studies to what extent women peelers become dependent on such intermediaries over a long period of time. What is clear is that payments on a piece-rate or daily basis are much more insecure than monthly payments, compounded by the irregularity in raw materials and work load. Subcontracting to peeling sheds and women working at home increases the irregularity of payments still further.

Therefore, the studies confirm that 'casualization of work' is taking place extensively in women's jobs, and has detrimental effects on women's working conditions, levels of income, job security and control over work. However, casualization of work occurs only for certain parts of the production process and certain types of work.

## 5.5. Conclusions

What conclusions can be drawn from the foregoing discussion? First, the characteristics of the different types of production units are discussed. Secondly, the gender division of labour and trends occurring in it will recapitulated.

1. First, large and small firms differ in the type of shrimp they process. Small firms are constrained by price levels and fluctuations.
2. Secondly, the technology and labour process used by large and small firms does not differ much. There is a clear difference between the freezing plant and peeling unit; the former uses a capital-intensive technology, and the latter, labour intensive. In both types of units, workers are differentiated into a few functions.
3. Thirdly, distribution channels for large and small firm differ; the former have more lucrative channels for exporting their products than the latter.

4. Finally, there is currently a strong trend towards vertical disintegration in firms; the pre-processing of shrimp (peeling) is increasingly subcontracted to separate peeling units.

The gender division of labour has been affected as follows.
1. First, women are found within all types of labour relations, ranging from the most stable to be found in the industry (temporary workers) to the most casual types of paid work. The case study results imply that women are found in greater numbers in the more casual types of work than in the relatively more secure types of work - but more exact figures by type of production unit are lacking.
2. Second, despite the fact that almost all women work within what is called 'short-term wage work' (Bromley and Gerry, 1979: 5), there are clear differences in the degree of 'shortness' which are essential in terms of workers' survival and should be more clearly reflected in a categorization of labour relations. The differences between men and women in unskilled functions are related to a) level and security of wages, and b) daily overtime versus seasonal underemployment.
Between unskilled and skilled women workers, these differences are related to a) skill differentials, b) relative scarcity of skills, and c) recruitment methods.
3. Third, segregation between men and women by function is almost total, and very little change can be seen in this.
4. Fourth, women are used as a cheap labour reserve within the industry, but the differences from men are those of degree, not of kind.
5. Fifth, substitution of men for women is not currently occurring in any function in the industry.
6. Sixth, de-skilling is not currently occurring within functions performed by women workers in this industry. For women entering the industry, learning to grade prawns is in fact a new skill. What is changing is the context within which the unskilled functions are carried out.
7. Seventh, there is no marginalization of women in numbers of functions to which they have access.
8. Eighth, the casualization of work (from registered units to unregistered units) has occurred extensively, as firms subcontract the pre-processing out to small production units through middlemen. This has led to a) lower wage levels, b) lack of fringe benefits and social security for the women workers.

Footnotes to Chapter 5.

(1) With the exception of 1978 and 1981, when China produced more. India produces 13.1% of the world's total shrimp catches (UNCTAD, 1983: 10).

(2) The other major producers are China, Indonesia, and Thailand, in the Indo-Pacific region. The United States is the fifth country in the group.

(3) Firms are ownership units, which may include several production units, whereas production units indicate a location where a part of the production process is carried out.

(4) The value of exports rather than the quantity of output has been taken so that different products as well as differences in product price can be compared.

(5) Export Houses have entered the shrimp processing industry in order to fulfil legal export obligations regarding product diversification and level of export values versus the value of import licenses. The advantages for the firms are that they receive interest-free loans from the Export Houses, and a net commission on sales.

(6) In the seventies, the situation was even more concentrated, according to various reports.

(7) Two types of freezing units are mentioned in the Bombay study: plate and tunnel freezers.

(8) The information given in the following paragraphs is derived basically from the material collected for the case studies on women's labour carried out in the different centres for fishing and processing.

(9) In the case studies concerning women's labour no distinction has been made between women working in large and small firms, such as is made in Valsala's study. Distinction is made rather between freezing plants operating in the organized sector, and peeling sheds in the unorganized sector. Therefore, the latter distinction is used for this section.

(10) The season in the Calcutta region is only six months, as shrimp are caught from inland fish ponds. They are bred there in the agricultural off-season, on available land (Banerjee, 1983: 19).

Methodological note

Within the IDPAD programme, the group of researchers concerned with women's labour in industry based their choice of sub-sector on similar criteria. The general objective of all studies was to trace the impact of change in production processes and organization on women's labour; it was felt that industry sub-sectors where a large percentage of workers were women and which were producing for non-traditional export markets would show the consequences more readily than others.

In the final reports, a certain variety in the criteria used became evident. Banerjee (1983) chose explicitly on the basis of 1) increasing eports, 2) significant participation of women workers in production, and 3) use of a variety of production techniques within industrial units. She chose cotton garments, leather goods other than footwear, frozen fresh prawns, and electrical consumer goods as sub-setors. Desai and Gopalan (1983) chose two sub-sectors within the food-processing industry because this sector has always traditionally been women's work, and the impact of transformation from traditional to modern forms of production can be felt well in this ector. They chose the appad, masala and pickle sector, and prawn processing. Mathew (1983) chose parts of the food-processing industry because women form a large percentage of the workers; they dominate in low-technology industries. On this basis, she chose fruit and vegetable processing and shrimp processing.

The Gulati study, which was not within the IDPAD programme, was also concerned with the impact of technological change on women, but in addition to work aspects focused on status and fertility behaviour. The major technological change studied was a large-scale fisheries development project set up by Norway in the sixties, whose long-term impact could begin to be measured.

The main focus of all these studies and the reasons for choosing particular sub-sectors were similar. However, in none of the studies were data given to bolster the statements made concerning the relative extent of women's participation in the industries chosen, so that they cannot be compared in quantitative terms.

The question of how representative the case studies are for the sub-sectors they concern is quite relevant. Table 5.9. gives details concerning the way the case studies were carried out. Regional representativeness is fairly good, as the shrimp processing industry was concentrated in certain geographic areas. The case studies come from most of the main areas of concentration.

Table 5.7. Case studies used as data base for shrimp-processing industry

| author | location | extent | part of IDPAD programme |
|---|---|---|---|
| N. Banerjee | Calcutta | 04 units<br>30 women | yes |
| N. Desai and P. Gopalan | Bombay | 05 units | yes |
| M. Mathew | Kerala | aggreg. unit data<br>100 women | yes |
| L. Gulati | Kerala | 3 villages<br>30 households, 10 women | no |

Next, the representativeness of the samples used in the case studies, both of production units and of women workers, for their particular regions, needs to be considered. Desai and Gopalan (1983) included in their population of production units those which 'grade, freeze and pack sea food products for export, which work eight months per year continuously'. Attempts were made to determine the complete population by using the Factory Inspectorate report of 1980 (which listed six units, five of which employ women), and the list made by the Marine Production Export Development Authority, whose figures are not indicated. Of the five units given in the former list, one was small (1-10 hired workers), three were medium (11-50 hired workers), and one was large ( >50 workers). How many management interviews were conducted is not explicitly mentioned. Women workers were selected according to the proportions 15-15-20 per size class of production unit, from small to large. Within each fish processing unit, care was taken to select both workers hired casually and seasonallly.

Mathew (1983) did not select a sample of production units, only aggregated data is included. Women workers were sampled from three out of five areas of concentration within the shrimp processing industry. Workers were selected based on the 'estimated proportion of workers in each district': 63 workers in Ernakulam, 30 workersin Allepey and 7 in Quilon. Presumably the proportion is derived from the numbers of exporters given for each district, but this is not explicitly stated.

Banerjee (1983) initially listed the production units in the 1981 Economic Census for Calcutta and Howrah; a 5% sample produced 32 units (from all industries selected). However, 40% of these units were found to be moribund, or had changed their products. Of other units 'hardly any were willing to give information, unless the invetigator ws personally introduced by some friends of the owner'. Finally, Customs House records of daily exports from Calcutta were used to select the regulr exporters of certain commodities. Both management interviews and interviews of women workers were carried out in such units.

Gulati (1984) selected the three villages on which the fisheries development project had had the greatest impact. Within each village, she selected ten women to give an overall picture, and further ten women for very intensive study. These women were chosen on the basis of willingness to put up with questioning over one year, creating a certain arbitrariness. However, they do, according to Gulati, cover all categories of working and non-working women.

From this discussion, it is clear that a) different sources of statistical information on total numbers of units must be used for each state, and b) criteria used for judging the representativeness of women workers are different in each case. Therefore, it is difficult to say either how representative each case study is for its locality, or what degree of comparability there is between case studies.

## CHAPTER 6. WOMEN'S LABOUR IN THE MEXICAN SHOE INDUSTRY

This chapter presents a case study of the situation of women workers in the Mexican shoe industry. The two questions raised concern the types of production units existing in the shoe industry, and their relations, and the second the changing division of labour between men and women in the different types of production units.

After a short discussion on the national shoe industry, the focus is on Guadalajara as one of three major centres of production - as will be shown in the coming chapter - and as an urban centre where research on women's labour in this industry had already been carried out. In addition, recent data was available for Guadalajara on the local industrial structure, labour markets, and functioning of poor households.

### 6.1. The national shoe industry

The Mexican shoe industry has been chosen as a case for several reasons. To begin with, government policies to protect domestic industry have included this sector (1). Secondly, the industry is one of the country's most important in terms of production value and number of people employed (Comercio Exterior, 1980). Thirdly, women's employment is extensive within this industry in comparison with others (2). Fourthly, the types of production units within this industrial sector vary from large scale production through domestic outwork.

Current government policies for the shoe industry have been directed toward the industry as a whole, with little distinction being made between policies for large-scale or small-scale production units. Policies consist of four elements. First, fiscal exemptions are permitted. However, very few enterprises have made use of this possibility, presumably due to the fact that most enterprises are very small, and owners have little access to the necessary channels. Secondly, the market for finished products is heavily protected against foreign competition, and this has been effective in terms of limiting imports of shoes. This has been done mainly by introducing strict price controls on the importation of raw materials, such as hides and leather. Thirdly, high 'duty tariffs' have limited capital imports and cheap energy has lowered the cost of domestic sales (Footwear News, Aug. 10, 1981). Finally, since 1982-83 the government has initiated a National Export Programme for the shoe industry, with the goal of exporting 18 million pairs of shoes by 1988. Among other measures, taxes on the import of parts and machinery have been eliminated (Footwear News, October 31, 1983).

What has the effect of such government policies been on the production and value added by the Mexican shoe industry? Production will be indicated both in numbers of pairs of shoes produced as well as in billions of pesos. However, such figures must be taken as an indication of a trend rather than as absolutes. As Hernandez Aguila (1983: 21) has shown there is little agreement among figures from different sources (2).

Table 6.1. National shoe production in Mexico from 1974-1986.

| year | production (million pairs (4) | growth rates | output value (billion pesos) | value added (US$ million) |
|---|---|---|---|---|
| 1974 | 163.5 | | | |
| 1975 | 175.8 | 7.0 | | 142.1 |
| 1976 | 189.0 | 7.0 | | |
| 1977 | 172.0 | -10.0 | | |
| 1978 | 184.5 | 6.8 | 21.5 | |
| 1979 | 189.0 | 2.4 | 30.0 | |
| 1980 | 210 | 10.0 | 39.1 | 174.8 |
| 1981 | ? | | 51.5 | |
| 1982 | 260 | | 78.3 | |
| 1983 | 200 | -30.0 | | |
| 1984 | ? | | | |
| 1985 | ? | | | |
| 1986 | 162.4 | | | |

Sources: 1974 - 1979: Comercio Exterior, vol.26, nr. 7, 1980.
1980 : Footwear News, July 13, 1981.
1982, 1983 : Footwear News, Sept. 10, 1984.
1986 : Footwear News, May 26, 1986.
1978-1982 output value: UN, Industrial Statistics Yearbook, 1982, vol. 1.
1975, 1980 value added: UNIDO, The Leather and Leather Products Industry, Sectoral Studies Section, no. 11, vol. II, 1984.

These figures show a steady rise in shoe production during the years of high economic growth in the seventies and until the crisis year 1982, when the peso was devalued. Figures for the output of the Mexican shoe industry (in billions of pesos) are available only for several years up to 1982. From 1978 to 1982, the value of output rose steeply, from 21.5 billion pesos to 78.3 billion pesos in 1982. The largest rise in value occurred between 1981-1982. The value added within the industry between 1975 and 1980 rose from 142 million US$ to 174.8 million dollars; a growth rate of 4.2%. From 1970 to 1975, the industry had grown at a higher rate, 7.7% (UNIDO, 1984).

The role of shoe exports as a part of total production is very limited. In 1980 exports constituted some 3% of total production, or 5.5 million pairs (Footwear News, Aug. 10, 1980). In 1982 and 1983, shoe exports dropped to, respectively, 2.5 million and 1.5 million pairs per year (Footwear News, Sept. 10, 1984). However, the government's export programme is having some success, as in 1986 exports had again risen to 6 million pairs (Footwear News, June 2, 1986). Exports are mostly limited to the output of very large shoe producers. This is clearly the case in Guadalajara, where only the largest companies export abroad - and then do so for a major part of their production (DEPRODE, 1982: Table VII.4). In addition, exports are regionally concentrated. In Leon, a consortium set up in 1973 to promote its members' exports, claimed that in 1979 55% of Mexico's total foreign-exchange earnings from footwear came from Guanajuato state.

Within the footwear industry, products are classified according to form, materials used, production process, and intended user. Under form, the classification includes boots, slippers, sandals, and shoes. In terms of users, footwear is classified as for children, young people, men and women. In terms of materials, footwear may consist of leather or other materials, such as hard textile fibres, rubber or a wide range of chemical industry products. Footwear made of leather and/or other materials is produced by a process of 'building-up'. Plastic footwear is produced by an injection process: i.e. by injecting liquid polyvinyl chloride or microlon into a mould with an injection machine. Production can be either fully automated or half automated. Although such shoes are becoming more important in Mexico, built-up shoes are still vastly in the majority in production totals. This study concerns only built-up shoe production.

The production of shoes is concentrated in three regions: Leon, Guadalajara, and Mexico City. Some 90% of all national production occurs there. However, existing figures on the regional distribution of production are very contradictory. Some indicate that Leon is the largest centre of production (Comercio Exterior, vol.26, nr.7, 1980), whereas others suggest that Guadalajara is the largest centre of production (GRUCI, cited in Hernandez Aguila, 1983: 27). In a recent issue of Footwear News (May 26, 1986), the distribution of production is indicated as being 37% in Leon (Guanajuato), 26% in Guadalajara (Jalisco), and 27% in Mexico City (the Federal District). This corresponds to the figures given in Comercio Exterior. What is important to note from these figures is that the industry is one of the few not predominantly located in Mexico City.

There is a certain amount of specialization among the three regional centres, although the types of shoes produced overlap considerably. In Leon, many shoes for men and children are produced. In Mexico City, shoes for men and women are produced, with a recent emphasis on synthetic shoes. In Guadalajara, primarily medium and higher-priced women's leather shoes are produced. The structure of the industry, in terms of types of establishments (ranging from small to large-scale units), is very difficult to trace. Several estimates exist, but they show a bias towards underrepresentation of small-scale production. Therefore the results given here should be interpreted as a minimum estimate of the actual number of existing units.

Each data source uses different criteria for classifying production units. These include the number of shoes produced, the level of sales, the number of employees, and the degree of mechanization. Within the several criteria mentioned, different quantitative limits are used. One author will categorize a "large" factory as one making 700 pairs of shoes per day; another will require 1500 pairs per day. This makes it very difficult to compare figures, let alone indicate developments over the years. For what it is worth, some data will be given at the national level, followed by estimates of capacity in Leon and Guadalajara.

In 1979, a national total of 5050 establishments was estimated. 450 establishments were fully mechanized and produced on average 735 pairs per day; 1600 were mid-sized enterprises producing 200 pairs per day, and the other 3000 establishments were family workshops producing an average of 18 pairs per day (Comercio Exterior, 1980: 265). At a regional level, the Centro de Investigaciones y Asistencia Tecnologica del Estado de Guanajuato (CIATEG) counted 800 mechanized factories, 1500 small partially mechanized factories, and 4000 family workshops in Leon in 1977.

In 1978 the Camara de la Industria del Calzado de Guanajuato counted 78 large factories producing 1500 or more pairs daily, 235 medium units producing between 500-1000 pairs daily and 507 small units producing between 10 and 500 pairs daily.

In Guadalajara, some 1200 establishments were counted in 1979, not including 'the numerous artisans workshops based on family production' (Arias, 1980a: 176). 80% of the establishments counted were small units; 20% were medium and large-sized, including the largest factory in Latin America. Alba carried out a survey of industrial activities in 1981, which led to the conclusion that 371 production units exist in the shoe industry (DEPRODE, 1982: Vol. I, 8).

An estimate of the relative importance of large, medium and small-scale production units can be derived from these figures, even when absolute numbers of etablishments are incorrect. The national estimate and the CIATEG estimate for Leon indicate that large units comprise 10% of all establishments; medium-size units, 25-30%; and family workshops 60%. Domestic outwork is left out of the estimates. In Guadalajara, the estimate is that 80% of all units are small. The main conclusion to be drawn from these figures is that family workshops form a major part of all production units in the industry, and that large-scale production units form a very small percentage. The extent of domestic outwork is unknown.

The shoe industry is predominantly owned by Mexican entrepreneurs. The role of domestic capital is large; only 6% of the industry is owned by foreign capital (Arias, 1980a: 179) (5). The overall level of capital investment per firm is relatively low in the shoe industry; it is a labour-intensive industry. Obviously, there must be wide differences in level of investment according to the type of firm considered. However, in Guadalajara more than half the large and small firms have primarily invested personal savings in their firms, and only an insignificant number have applied for bank loans (DEPRODE, 1982: Table X.7).

There is little vertical integration in the industry. However, the role of backward and forward linkages is fairly important. An important backward linkage is with the tanning industry, as hides are a scarce raw material and a major production cost for the footwear industry. Imports of leather are heavily taxed to protect the domestic tanning industry, effectively prohibiting this possibility for shoe producers. Alternative synthetic materials are relatively expensive in comparison to leather. and, therefore, do not offer a solution for the high cost of leather. However, the scarcity of raw materials affects large shoe producers more than small ones. The latter encounter problems with fluctuations in prices of raw materials (6).

The tanning industry is located in almost the same regional centres as the footwear industry, and the latter is the main customer for the former; 80% of all hides cured in Mexico go into footwear. Large footwear producers often have their own tanneries and even cattle ranches, in order to assure their supply of raw materials. Small footwear producers do not have the resources to build up stocks of raw materials, and must buy from middlemen who offer financing but raise prices by at least 30% (Comercio Exterior, 1980: 267).

An important forward linkage is to the domestic marketing system. The big footwear firms have their own sales representatives, who distribute some 70% of their total production among wholesalers and retailers. Alternatively, they may have their own chain of shops. The remaining production is sold on consignment or exported. Small producers rarely have

direct access to the market; this tends to limit their profit margins. They work for wholesalers or retailers; some will sell directly in specialized markets or on the street (Comercio Exterior, 1980: 270; DEPRODE, 1982: Table VII. 1).

Total employment in the Mexican shoe industry is very difficult to trace. This is due to the different criteria used to include or exclude categories of workers. In particular, unpaid family workers are not usually included in the employment figures given here. The following table contains a compilation of employment figures given in various publications; they must be considered little more than estimates.

Table 6.2. Employment in the Mexican shoe industry

| | 1970 | 1978 | 1979/1980 | 1981 |
|---|---|---|---|---|
| All Mexico | 36,000 | 62,000<br>310,000 (incl. family workers) | 168,000 | ? |
| Mexico City | 7,000 | | | |
| Guadalajara | 9,000 | | 30,000 | 122,360 1) |
| Leon | 13,000 | 63,000 | | 57,900 |
| others | 7,000 | | | |

1) This figure is based on an extrapolation of a 12% survey conducted by DEPRODE among all industries in Jalisco in 1981.

Sources: 1970, Censo Industrial.
1978, All Mexico, Calleja, 1984: 84.
Leon, Sanchez et al., 1980: 57.
1979, Guadalajara, Arias, 1980: 176.
1980, All Mexico, GRUCI, 1980, cited in Hernandez Aguila, 1983; Comercio Exterior, 1980.
1981, Leon, Arocena, 1982.
Guadalajara, DEPRODE, 1982.

The division of labour between men and women in the shoe industry is only indicated in passing in most estimates of employment at the regional level. In Leon, 15-20% of all people employed in the footwear industry are estimated to be women (Sanchez et al., 1980: 58). More specific estimates are also made by type of establishment. In Leon, women are estimated to be 14% of workers in large factories, and 85% of those carrying out domestic outwork (Arocena, 1982: 81). In Guadalajara, women are estimated to be 20-25% of all employees in large factories, and a variable percentage in the various types of small-scale production (Hernandez Aguila, 1983: 52,65).

Overall, there is a fair degree of specialization in skilled functions in the footwear industry. In particular, the functions of cutter, sewer, and technician are considered highly skilled. Employers indicate that there is a relative scarcity of skilled workers in the industry, and that

widespread before that time, providing both training on the job and cheap assistants for skilled workers. Since then, the training function has been largely taken over by the small-scale sector. In these firms, young workers learn the skilled functions within the trade; they are then often hired away by large factories.

The methodological note included at the end of this chapter indicates that there are sufficient similarities between the situations in Guadalajara and Leon to assume that the situation in Guadalajara is typical of the shoe industry elsewhere. As the typologies developed by Alba and Hernandez Aguila are paralleled with regard to the number of workers, and since these descriptions are by far the most complete, a description of the situation in Guadalajara will be given, and is based extensively on these two authors.

## 6.2. Guadalajara; urban and industrial development

The existing social and economic structure of Guadalajara is briefly described as the context of the situation in the shoe industry. It is Mexico's second largest city, with some three million inhabitants (Escobar, 1986: 43). Together with Monterrey and Mexico D.F. it forms the trio of the largest industrial cities in Mexico. The growth of Guadalajara to second largest city has occurred over the past forty years, and is due to the cumulative effect of several trends.

To begin with, Guadalajara has always been a regional centre for western central Mexico, situated at a junction of roads and railroads, and functioning as a centre for commerce and trade. It is also the capital of the province of Jalisco, and as such has administrative and judicial functions. Secondly, over the years Guadalajara has been a centre of immigration within Jalisco. Its urban labour market, therefore, offers people with a wide variety of skills. Thirdly, trade, commerce and some industrial production has been undertaken by many different groups of entrepreneurs in Guadalajara. Before World War II an important role in this incipient industrialization was played by the entrepreneurs who originally came from Europe, emigrated to Guadalajara, and set up or took over local industries and commerce.

In the aftermath of the Second World War, the current phase of industrial growth in Guadalajara began. At that time the city's population was around 240,000, and the city was divided more or less into four large quarters; Reforma and Libertad were workers' neighborhoods, and Hidalgo and Juarez were middle-class and elite areas. The commercial and trading centre with the huge city market was at the centre. At that time, industrial zones and workers quarters were planned at the far edges of the city. By 1987, the city limits had expanded, and the industrial zones were well within them. Tlaquepaque and Zapopan villages had also been incorporated.

The policy of import substitution has been the context for Guadalajara's growth in the past forty years. The following figures illustrate the industrial growth which occurred. From 1960-1975 value added grew at an average rate of 7.7% per year (Alba, 1986: 112). The city became the national leader in eleven industrial sectors, and took second position in twenty-three branches of industry. In terms of value of production, the three largest industries are foods, beverages, and shoes (Alba, 1986: 115-6). In terms of employment, the largest industries are foods and shoes (see Table 6.3.).

Industrial structure

In each industry, there are usually a few large firms which dominate it, and a large number of medium and small-scale units. Using a cut off point of five million pesos value added as a minimum, Alba finds 297 leading industrial firms. These are mainly firms with high capital investment, relatively advanced technology, and producing for a national or export market. Ownership of these firms is usually one of four types: a) multinationals, b) national ownership from outside the region, c) state enterprises, and d) locally owned enterprises. Workers in these firms receive relatively high wages, and are organized in trade unions, primarily the Confederacion Trabajadores Mexicanos (7). Although there are a few large firms in most sectors, larger units are more prevalent in the intermediate and capital goods industries, which came to Guadalajara in the late sixties. Such sectors include wood, paper, plastics, and non-metallic minerals (Alba and Kruyt, 1988: 90). However, factory-size units make up only some five to ten percent of all industrial units.

Medium and small-scale production units are found in the older industries - mainly food-processing, textiles, clothing and shoes (Alba and Kruijt, 1988: 92). The industrial census of 1975 recorded some 9000 units of this type; they make up over 90% of all industrial establishments (8). Capital investment is very low, and use of labour high. Relatively simple technology is used, and products are sold on the local market. The work is still characterized by a certain amount of 'craft' skills. The most common form of production unit is that based on the household unit, or units located in homes.

The general trends indicated here, of course, conceal diffferences between developments in large industries and in small-scale production units. Alba defines large, medium, and small-scale industry according to sales and number of employees (see methodological note at end of chapter). The differences in their internal and external characteristics will be briefly described here, based on a sample survey carried out in 1982 by DEPRODE.

Generally speaking, the smaller the production unit, the more local the machinery, spare parts, and technical assistance used. In small-scale units three-fourths of the machines used come from within Mexico, half of them from Jalisco itself. Medium-size enterprises make more use of machinery acquired nationally, plus some imports. Large industry primarily uses imported machinery. The machinery used in small-scale units is also older and less developed than that used in the large industry.

The use of raw materials also varies widely between small-scale and large industries, and is primarily determined by the scale of operations. The smaller the unit, the more local the raw materials used. Payments are made in cash or with a maximum of thirty days credit. Medium-sized enterprises buy their raw materials on the national market; only a third come from Jalisco. Arrangements for payments are similar to those of small producers. In large industry a relatively large percentage of raw materials is imported (15% of total value). Transportation (railroad) plays a more important role for this category of industries. Payments are made in cash or with thirty days credit.

Production figures must be read with some caution, as the situation described is before the 1982 crisis. Almost all small-scale units work only one shift, and two-thirds of the units do not utilize their complete capacity. Principal reasons given for this are insufficient funds and workers. The majority of medium-size units also work only one shift, and

Table 6.3. Principal industries and their characteristics in Guadalajara metropolitan zone, 1975

| | no. establishments | % of state total | employment | % of state total | gross production (1) | % of state total | value added (1) | % of state total |
|---|---|---|---|---|---|---|---|---|
| total of all industries | 5,405 | 57.47 | 84,745 | 73.01 | 22,673,067 | 75.95 | 9,030,032 | 77.91 |
| mining | 7 | 25.00 | 302 | 24.71 | 42,263 | 22.66 | 17,256 | 22.78 |
| manufacturing | 5,398 | 57.57 | 84,454 | 73.54 | 22,630,804 | 76.28 | 9,012,776 | 78.30 |
| food products | 2,150 | 47.86 | 15,008 | 55.29 | 6,858,096 | 72.39 | 1,728,562 | 67.74 |
| beverages | 26 | 27.37 | 6,026 | 82.21 | 2,657,585 | 80.45 | 1,333,556 | 81.59 |
| tobacco products | 4 | 100.00 | 527 | 100.00 | 620,813 | 100.00 | 455,705 | 100.00 |
| textiles | 77 | 74.76 | 6,427 | 94.24 | 1,073,528 | 94.95 | 543,897 | 97.25 |
| wearing apparel | 499 | 75.72 | 3,515 | 76.36 | 423,143 | 90.32 | 168,850 | 99.30 |
| leather & footwear | 293 | 66.29 | 12,591 | 91.86 | 1,911,795 | 96.89 | 717,725 | 96.85 |
| wood & cork products | 78 | 50.32 | 1,066 | 28.56 | 75,447 | 22.42 | 29,301 | 17.65 |
| furniture | 298 | 70.62 | 2,674 | 81.03 | 364,679 | 93.76 | 147,644 | 92.77 |
| paper | 28 | 90.32 | 1,195 | 53.93 | 354,251 | 39.91 | 118,130 | 28.07 |
| printing and publishing | 296 | 90.52 | 1,703 | 86.67 | 190,005 | 95.37 | 85,555 | 94.72 |
| chemical industry | 100 | 77.52 | 5,398 | 57.81 | 1,686,458 | 45.74 | 913,866 | 64.20 |
| petroleum and coal products | 4 | 100.00 | 36 | 100.00 | 4,567 | 100.00 | 2,403 | 100.00 |
| oil and plastics | 116 | 95.08 | 3,968 | 93.34 | 1,105,800 | 96.62 | 497,250 | 97.39 |
| non-metal mineral products | 262 | 28.82 | 4,397 | 57.70 | 889,303 | 70.61 | 434,059 | 68.42 |
| iron and steel | 20 | 100.00 | 1,620 | 100.00 | 586,428 | 100.00 | 170,983 | 100.00 |
| metal products (excl. machinery and equipment) | 640 | 72.23 | 6,464 | 86.23 | 983,839 | 95.27 | 435,558 | 95.41 |
| non-electrical machinery | 268 | 85.35 | 3,536 | 81.53 | 707,673 | 72.31 | 369,192 | 77.07 |
| electrical machinery | 63 | 98.44 | 3,177 | 93.59 | 825,086 | 99.93 | 331,288 | 99.92 |
| transport equipment | 75 | 92.59 | 2,878 | 96.45 | 590,713 | 99.87 | 261,501 | 99.81 |
| other manufacturing industries | 101 | 85.59 | 2,248 | 92.47 | 620,595 | 98.92 | 267,748 | 98.32 |

Source: Advance on results by municipality, X Censo Industrial, SPP. Quoted in Alba Vega and Kruyt, 1988.

two-thirds do not utilize their full capacity. The principal reason is lack of workers. In large industry, more than half of the enterprises work three shifts, and some 35% work twenty-four hours per day. Principal problems are the lack of workers and raw materials (Alba and Kruijt, 1988: 109-110).

Sales of products of small-scale units are local, often confined to the city itself. 70% of the enterprises sell directly in cash to the public. Principal problems are the lack of clientele and the competition from other units. Medium-size units sell their products primarily in Jalisco, but a third of sales are on the national market. These units sell to intermediaries of all sizes. Their main problems are price fluctuations and competition. Large industry is oriented towards the national market, and 20% of the enterprises also export (Alba and Kruijt, 1988: 110-111). Products are mainly sold to large traders or industrialists. The main problem for this type of industry is transportation.

Most small-scale producers do not use any form of outside credit (Alba and Kruijt, 1988: 112-113). If necessary, they borrow from family and friends, or from money lenders. Medium-size industrialists use private banks for borrowing, mainly for medium-term loans. Large-scale industry also primarily uses personal, or medium-term loans, when borrowing.

## Labour market

This description of the industrial structure of Guadalajara will now be complemented by a short discussion of its labour market. The working population of Guadalajara was 770,579 in 1982 (Censo General de Poblacion Vivienda, 1983). Table 6.4. indicates that on average men were 69% of the total working population and women 31% in 1978. Men and women are distributed over economic sectors in much the same manner. However, there is a greater concentration of men than women in industry (24% men versus 17% women). Among women alone, the highest percentage are found in the service sector (50% of all working women). The second-largest group is found in trade (27%), and the third-largest group in industry (21%).

A first point to be seen in this table is that two-thirds of Guadalajara's male population (older than 14), and one-third of the female population (older than 14) is in the 'economically active' category. However, one cannot assume that the adult population which is not registered as 'economically active' is in fact completely inactive. Some 225,000 men and 500,000 women not registered as economically active can be considered to be the reserve from which people are recruited to the 'informal economy'. The latter figures indicate the maximum number of the urban population who could be working in the 'informal economy'. It must be noted, however, that the labour of children under fourteen has been excluded from this estimate, although it is realistic to assume that a certain percentage of children also work.

Table 6.4. Distribution of working population in Guadalajara by sex and economic sector

| Industrial sector | Ec. Act. population | % | Men | % | Women | % |
|---|---|---|---|---|---|---|
| Guadalajara | 733 843 | 100 | 508501 | 69.3 | 225342 | 30.7 |
| Primary sector | 14 200 | 1.9 | 13 819 | 2.7 | 361 | 0.2 |
| Manufacturing | 194 167 | 26.5 | 155 762 | 30.6 | 38405 | 17.0 |
| Construction | 57 982 | 7.9 | 56 077 | 11.0 | 1905 | 0.8 |
| Electricity | 2 668 | 0.4 | 2 287 | 0.4 | 381 | 0.2 |
| Commerce | 141 180 | 19.2 | 91 170 | 17.9 | 50010 | 22.2 |
| Services | 239 363 | 32.6 | 117 434 | 23.1 | 121929 | 54.1 |
| Transport | 32 751 | 4.5 | 30 464 | 6.0 | 2287 | 1.0 |
| Government | 25 944 | 3.5 | 19 820 | 3.9 | 6124 | 2.7 |
| non-specified | 25 588 | 3.5 | 21 668 | 4.3 | 3920 | 1.7 |

Note. "Guadalajara" refers to the area covered by the city. The figures given here differ from those mentioned in the text above, as they refer to different years.

Source: Encuesta continua sobre occupacion (SPP) Serie 1, vol.6, trimestre 4, 1978, 69. Quoted in Escobar, 1986.

A second point which can be made concerning Table 6.4. is that figures based on population censuses show more than twice as many people working in industry than do the figures based on the industrial census. Thus in Table 6.3., 84,454 people are shown to be working in industry in 1976, whereas in Table 6.4. 194,167 people are working in industry in 1978. The difference of two years is not sufficient to account for the large difference. Since the population census is based on answers by workers themselves, and the industrial census on data provided by firms considering their employees, the former must be considered to have more validity than the latter.

The labour market in Guadalajara is characterized by great social mobility. Immigrant groups from the rural areas of Jalisco have relatively easy access to work and a basic income in the construction industry. From here, one can move on to other jobs (Escobar, 1986b: 207). Most groups of workers in the urban labour market find it relatively easy to find and change jobs when they wish to do so. This does not imply a totally homogenous labour market, however. Although the labour market is dynamic, there are a number of variables which do influence workers' chances. These have been traced recently in an extensive survey of workers in Guadalajara (Escobar, 1986).

A first group of variables affecting workers are their personal characteristics. Gender is a main variable affecting workers' chances. In the survey, it was found that women had less variety in jobs held, and earned lower wages than men (overall there was an 18% difference; excluding state jobs, there was a difference of 23%) (Escobar, 1986: 154). Other factors affecting workers' chances were age, marital status, and skills. Young workers found it easier to change jobs than older workers.

Single workers also tended to change jobs more often than married workers. Skilled workers also found it easier to make job changes which led to better working conditions than did unskilled workers.

A second group of variables affecting workers relates to the type of labour process within which they work. Escobar differentiates among three types of labour processes; the exogenous bureaucratic, the endogenous, and the unskilled labour process. The first occurs mainly in large firms which train their workers internally, and have a hierarchy of jobs within the firm. Working rules tend to circumscribed, and used fairly objectively. The second type is that of the skilled craftsman, and the third is unskilled labour, where access is easy, but workers fairly interchangeable.

The impact of a dynamic labour market and a diversified industrial structure on class formation can be seen clearly. Despite the fact that wage levels are generally lower than in Monterrey or Mexico D.F., there is little social unrest. There are two major trade union conglomerates, and these are active mainly in large-scale production units, and work in a bureaucratized manner (Tamayo, 1985: 154). In addition, there is a certain amount of worker protection in the labour legislation and arbitration procedures. This has led, however, to more informal ways of dismissing workers. Such tactics include decrease in work given, few opportunities for overtime, criticism of work done, and no favours given by the owners/managers. The final result for workers currently is that they choose to change jobs rather than fight out conflicts, which they are unlikely to win.

The crisis of 1982 has affected Guadalajara less than one would expect of the second largest industrial city in Mexico. This is related to the peculiar nature of the industrialization process that has taken place there. First of all, industries have been based on local materials, and products sold to regional and national markets. This has meant that, although there has obviously been a loss of buying power in Mexico, the difficulties experienced in production due to the devaluation of the peso (in terms of raw materials or product markets) have largely been avoided. Secondly, commercial traders in Guadalajara usually have a rural background, and are conservative in financial transactions. Therefore, the local debt situation is not bad in comparison with other industrial areas. Thirdly, many industrial sectors are represented in Guadalajara; this has lessened the impact of unemployment, since there are possibilities of adjusting to higher unemployment in one industrial branch by finding work in another. Finally, the predominant small-scale production units have absorbed a great deal of unemployment (Alba, 1986: 135).

## 6.3. Forms of production in the shoe industry

In this section, the forms of production prevalent specifically in the shoe industry will be discussed. As was indicated earlier, there are basically four types of production units in the shoe industry: large-scale factories, medium-size production units, workshops, and domestic outwork. However, the medium-size factories resemble workshops in many aspects. Therefore, the reader will find these two categories combined in some instances. The question to be answered in this section is as follows: what are the characteristics of the different forms of production, and how are they interrelated? Before going on to describe the production units, a short description of the footwear production process is given.

The production process for built-up shoes is characterized by separate production cycles for uppers and soles, which are assembled afterwards to form the whole shoe. The following operations are common to all production processes: 1) clicking or cutting parts for uppers from leather sheets, 2) preparation and sewing of the uppers in the closing room, 3) lasting and bottoming, i.e. assembling uppers and soles, 4) finishing, i.e. removing rough edges, polishing, and shining, and 5) packing. In each part of this production process, there is a choice between manual and machine techniques, so that production can be carried out in either a relatively capital or labour-intensive manner.

Stitching, lasting and bottoming are the most labour-intensive operations. These two operations will be described somewhat further, given their importance for employment opportunities. Closing, which consists of preparing materials and sewing them, is a relatively straightforward process. In lasting and making, one finds a variety of techniques to combine the uppers and soles. These include: 1) stitchdown method, 2) the cemented method, 3) the Goodyear welt process, 4) McKay stitching, and 5) direct moulding. The shoemaking process includes two operations; lasting and bottoming. Lasting consists of pulling the edges of the uppers around so that they fit the sole, whereas bottoming consists of combining sole and uppers. Lasting is divided into toe, heel, and side lasting.

Bottoming consists of different sub-operations, the number depending on the type of technique used. To compare the labour-intensity of the different operations, an example is given from an UNIDO proposal for a shoe factory for the African continent. Out of a total of 39 minutes needed to produce one pair of shoes, 19 minutes were spent on stitching, and 14 minutes on lasting and bottoming. Cutting absorbed 4 minutes and sole preparation 2 minutes (UNIDO, 1978).

What factors weigh most heavily in the choice of technique? Boon indicates that in the Mexican context, the factor considered of primary importance is volume of output (Boon, 1980: 109). In second and third place, cost of labour versus capital investment in machinery weigh heavily. This would imply that the larger the firm's production, the more capital-intensive production methods it would use. The level of production at which it becomes efficient in financial terms to introduce more machinery lies between 300-500 pairs of shoes per day (personal communication, J.Berg, UNIDO).

An overview of the different types of production units is given in the following figure. Information is given on fixed investment per type of unit, operational costs, and general levels of employment in each type of unit. The degree of vertical integration from tanning of leather to the sale of shoes is also indicated. From the figure, one can see that the different types of production units overlap in several respects, and differ in others. This suggests that a particular production unit can also evolve from one type into another.

Figure 6.1. Investment and operational costs according to firm type in the Mexican shoe industry, by type of firm

| | fixed investment | operational costs | employment |
|---|---|---|---|
| I.Vertically integrated firm | | | |
| large factory | - (tannery)<br>- production of primary parts other than leather<br>- building<br>- machinery<br>- sales outlets | - power<br>- raw materials (including plastic, leather, accesories)<br>- retailing costs<br>- labour costs | >100 |
| II. Partially integrated firm | | | |
| medium size factory | - second-hand machines<br>- own building | - power<br>- labour costs<br>- raw materials | - 51 - 100 |
| small workshop | - own house/ courtyard<br>- hand tools, second-hand machines | - labour costs, including apprentices<br>- raw materials via buyer | - 6 - 50 |
| III. Non-integrated firm | | | |
| domestic outwork | - hand tools<br>- sewing machine | - electricity<br>- transport | - 0 - 5 |

Sources: E. Hernandez Aguila, 1983, Las Adornadoras en Guadalajara: condiciones de trabajo y salud, B.A.thesis, Univ. of Guadalajara.

DEPRODE, 1982, La Situacion Industrial en Jalisco, five volumes.

L. Arocena, 1982, Forms of Production in the Shoe Industry in Leon, Guanajuato, Ph.D. thesis, Univ. of Texas, Austin.

M. Calleja, 1984, Unidad Domestica y Organizacion del Trabajo de la Industria Calzado en Leon, Guanajuato, M.A. thesis, Univ. of Leon.

History of the local shoe industry

The typology of production units given has not sprung full-blown from a void, but has evolved in Guadalajara since the turn of the century, when the shoe industry emerged as an important sector in the city's overall industrial development. The main actors in the industry are a) the traders/shopkeepers, b) the workshops and family production units, and c) the large industrial production units. In the following paragraphs, the changing roles of these actors is indicated.

In the early decennia, household production was the main form; this was based on family labour, and made use of simple hand tools and sewing machines. The shoes produced were bought on credit by whole-salers, and sold regionally (Calleja, 1984: 52-53). The traders/shopkeepers often had five to ten small production units under contract. This was not a permanent situation; contact fluctuated between producers and traders, according to the popularity of the shoe produced and the price paid by the trader. In addition they would buy from other small producers. However, they had some preference for urban producers in Guadalajara, with whom they could retain contacts, and whose production they could more easily determine. The large traders from the city dominated the shoe market in selling not only in Guadalajara itself, but also in the rest of the state. They needed to invest only small sums in setting up one or two shops in Guadalajara city. The regional distribution network was more expensive, as it required a number of representatives to cover the various villages and towns, but this made it possible to offer a diversity of products in a wider region. The effect was that small local shoe producers and shopkeepers were gradually pushed out of the market, as they could not compete (Arias, 1985: 224-226).

The Second World War represented a boom period in the industry, because the possibilities for exports to the USA greatly increased. This period led to the enrichment of a group of shopkeepers. After the war they became a group of people with sufficient capital to increase their social mobility by buying property, and giving their children a higher education. A number of small shopkeepers/traders also became producers, more because of their knowledge of the industry and contacts in the market than because they had large amounts of capital. They could make use of family labour, and were interested in organizing the work. In their own units, they produced only standardized types of shoes; more risky types were contracted out to other units. After the Second World War the large industrial producers selling on the national domestic market emerged from this group (Arias, 1985: 227-229).

The small shoemaker (basically working alone or with his family) could make a better living in this period than before, but his position remained about the same. As an 'independent' producer, i.e. having his own machines and raw materials, it was important to have a regular buyer for the finished shoes. This was the trader/shopkeeper. A 'dependent producer' was someone whom the shopkeeper initially supplied with orders. The difference lay only in the degree of stability in the work orders received by the shoemaker.

The division of labour within the producer's family was linked to the family life cycle. The period in which the children were between the ages of 10-20 was, from the point of view of the amount produced and prosperity of the family, the best one. Unmarried sons and daughters received no salary, but increased production substantially. After

marriage, sons would receive some income and often started production on their own. Married daughters would 'help' their mothers, but received no pay for this work (Arias, 1985: 233-34).

The division of labour was also linked to the skills of the individual person. Young boys usually become apprenticed, either to their father or some other skilled worker. By helping in the production process, they learned the necessary skills. Such training mainly occurred in the small production units, where it was encouraged by the owners (Arias, 1985: 238). The functions which are still considered to be most skilled are cutting and stitching. Girls and women are also trained within informal channels; working with other women 'finishing' shoes at home. This function is usually put out as domestic outwork, and is considered unskilled.

A small number of large factories have gradually evolved in the search to increase labour and machine productivity. Between 1900 and 1910, 'finishing' was first split off as a separate function, introduced by employers to increase the productivity of the male artisan (Hernandez Aguila, 1983: 108). From the twenties onwards, mechanization occurred increasingly in both smaller and larger production units. In the forties and fifties, a number of workshops gradually developed into factories. This entailed dividing the production process into many smaller functions, each requiring less skill from the person performing it. In large and medium-size factories, where only certain types of standardized shoes are made, such sub-divisions were extensive. One of these evolved workshops has grown to be the largest firm in Mexico (Calzado Cañada).

However, the combination of small-scale production units and an extensive trading network has remained the dominant pattern. The explanation for this phenomenon lies in a) the specialization nationally among the regional centres, and b) the dominance of the traders in the shoe industry in Guadalajara (Arias, 1985: 243). The specialization within Mexico has been such that Leon produces mainly men's shoes, in which patterns do not change quickly. This has made large-scale production possible. For women's and children's shoes, in which Guadalajara specializes, patterns fluctuate, and small batches of production are better carried out in small flexible production units. The factories that do exist concentrate on traditional products which seldom change.

## Production unit structure

These developments have led to the current diversity in firm structures. In the following paragraphs a description of the differences in internal and external firm structures is given.

Factories are a very small percentage of the total number of firms in the shoe industry. In Guadalajara, they are less than five percent of all firms. Nevertheless, one of the largest factories in all Mexico is located in Guadalajara (Calzado Cañada). Generally, factories buy their raw materials through suppliers with whom they have longstanding agreements. Scarcity of raw materials - particularly leather - is their largest problem.

Standardized products are made for steady markets. A certain amount of less-standardized products are produced; these are subcontracted to other firms for the actual assembly process. The production process is split up into several production lines, with automatic conveyor belts determining speed of production. The process in Calzado Cañada is split up into 97 different functions, with, on average, one machine per worker. The machinery used is specialized by function. On average, one-third of the machinery is imported. Use is also made of machinery bought in the domestic and Jalisco markets. In the factories, a change-over from skilled labour to unskilled labour is taking place. As the investment in machinery is fairly high, it must be counterbalanced by cheaper unskilled labour and products with a steady sales market.

Product sales are either made by way of large buying cooperations, or by a chain of retail stores owned by the factory. The former channel is used by medium-large factories, the latter by the very large factory. The owner of Calzado Canada has suggested that the merchants (i.e. the large wholesalers and owners of chains of retail stores) try to prevent factory owners from establishing outlets independent of the existing trading channels. Ownership of the factories is mostly local. Although most firms are nominally limited liability companies, in reality one family usually controls the activities.

The medium-size factories resemble workshops in several respects. Raw materials are bought directly from a tannery by the owner, and products are less standardized. The product market is similar, consisting mainly of traders and large shopkeepers. The section on workshops gives more detail on these aspects.

The internal structure of the medium-size factory is different from both large factory and workshop. In each part of the process production is split up into several functions. However, the number of functions is less than in the large factory. Although machines are used for the various types of functions, they tend to be second-hand. The division of labour between men and women is less structured than in the workshops. The number of functions carried out by women vary greatly. Both skilled and unskilled functions are distinguished.

In the workshops, raw materials are bought by the owner or manager of the production unit. Buying is done directly from tanneries or firms specializing in selling raw materials. Shoe producers buy on a cash basis or thirty days credit. This manner of buying is facilitated by the presence of the workshops and tanneries in the same neighborhoods in Guadalajara, so that transport is easy and inexpensive.

The products made depend on the types of orders received and the shoe-making techniques known by the producer. The type of products made varies a great deal. The tools used are mainly hand tools, which can be used for making various types of shoes. When machines are used they are second-hand. They are local manufacture, and on average are between 10-20 years old (DEPRODE, 1982: Table IV.2).

One person carries out a complete segment of the production process. This means that the major parts of the production process are not split up further into smaller functions, as is the case in the factory. Five to six major segments are distinguished by the producers. Both men and women work in each part of the production process; however, only women work in 'finishing'. In the workshops, use is made of both unpaid family labour and wage labour.

The owner/manager is usually a skilled shoe maker, and head of a family in which other members can carry out different parts of the shoemaking process in order to complete his activities. The change from skilled wage worker to owner/manager of one's own production unit is not an irreversible process. The owner must establish a long-term client (who can be a wholesaler, shopkeeper, or middleman) for his products, so as to have a minimum cash flow to pay for raw materials and labour. The producer-client relationship is always an uneasy one. In Calleja's study a description is given of the friction between the two, and the constant jockeying for financial advantage. This leads to a large measure of uncertainty for the production unit. If the owner/manager fails in finding good distribution channels for his shoes, he can decide a) to decrease the number of wage labourers employed, and substitute unpaid family labour, or b) give up the unit, and work as a wage labourer again. In the latter case, other family members will also try to find wage work, either in other production units, or working at home. Married women will mainly work at home, receiving finishing work either from their husbands, workers, or from workshops.

Escobar (1986: 138-152) describes a workshop located in a private house, and run by a couple. They employ between 18 and 22 people at a time, and produce between 300 and 500 pairs of shoes per week. The type of shoes produced is quite variable. They have a number of machines: two sewing machines, a last, a gluing machine, a press, and a sole stitcher. These represent a total investment of 108,000 pesos, and an actual value of 225,000 pesos (at 1982 levels). The highest-paid function is stitcher (35 pesos per pair of shoes), and the next highest is finisher (20 pesos per pair). In total, they pay 130 pesos labour per pair, and use unpaid family labour representing 16 pesos in value. Material costs are 321 pesos per pair, and other costs 14.45. In total, each pair of shoes costs 465.45 pesos. Their margin for overhead costs and profits is 34.55 pesos per pair. Their weekly income comes to 12,000 pesos, and as such, is much higher than the salary they could earn as wage labourers.

Domestic outwork primarily involves two functions: stitching and finishing. Workshops usually provide the work, delivering raw materials and taking back the finished work. These raw materials usually consist of partially made shoes needing further processing. The finished and sometimes packed shoes are delivered to the workshops or retail stores from which the work was initially received. Conversion wages are paid for such work on a piece rate basis. The division of labour within the family depends on gender, age, and the skills already acquired. Men work mainly as stitchers. Married women mainly work as finishers, enlisting the unpaid help of their children. A family may use two income-generating strategies, working both as wage labourers and domestic outworkers, depending on the employment possiblities offered and the available labour within the family.

Figure 6.2. indicates the various aspects of production that have been discussed above, and shows the differences between factories, workshops, and domestic outwork.

Figure 6.2. Internal and external characteristics by firm type in Mexican shoe industry

| | large factory | medium factory | workshop | domestic outwork |
|---|---|---|---|---|
| raw materials | - fixed suppliers; scarcity a problem | - bought directly from tannery by owner<br>- price a problem | | - material for weekly production cycle given by workshop |
| product type | - standardised, with fixed buyers; more variable production contracted | - non-standardised production; many changes | | - shoe parts, when stitching; shoe, when finishing |
| technology | - split-up prod. process; line production<br>- on average, one machine/worker<br>- 1/3 imported machinery | - several functions per part process<br>- second-hand machines | - hand tools<br>- local machines<br>- one worker carries out whole process | - hand tools<br>- sewing machine |
| division of labour M/W | - women 20-25% of total workers<br>- mainly in 'finishing', also stitching, lasting; when stitching became mechanized, women were removed from that function | - M and W in all parts of production process | - women only in finishing | - man skilled worker (stitching)<br>- women in finishing (unskilled) |
| product market | - retail stores owned by factory<br>- fixed wholesalers (esp. for domestic market) | - traders/ large shopkeepers | | - workshops |
| prod. process/types of labour | - split-up of functions (96)<br>- skilled/unskilled labour | - 6-8 functions in finishing<br>- wage labour, unskilled and skilled | - family/ wage labour/apprentices<br>- one worker/ whole process | - disguised wage labour, unpaid family labour |

Sources: E. Hernandez Aguila, 1983, Las Adornadoras en Guadalajara: condiciones de trabajo y salud, B.A. thesis, Univ. of Guad.
DEPRODE, 1982, La Situacion Industrial en Jalisco, 5 volumes.
L. Arocena, 1982, Forms of Production in the Shoe Industry in Leon, Guanajuato, Ph.d. thesis, Univ. of Texas, Austin.
M. Calleja, 1984, Unidad Domestica y Organizacion del Trabajo de la Industria Calzado en Leon, Guanajuato, M.A. thesis, Univ. of Leon.

## 6.4. Women workers and the gender division of labour in the shoe industry

In this section the ways in which women find employment in the shoe industry are discussed. First, the social background of the women workers is explored to see what factors influence the access of women workers to employment in the different types of firms in the shoe industry. Then a description of the characteristics of women's labour in the industry is given, emphasizing differences related to the structure of firms. Finally, the influence of changes in organization of production on women's work is discussed.

The information here is based primarily on the field work carried out by Maria Sanchez de Tagle Reynoso and Elena de la Paz Hernandez Aguila for their B.A. theses, the results of which they kindly made available. Although women workers from all types of production units have been interviewed, differences in their characteristics are not always systematically distinguished. In the text, the differentiation is indicated where available.

### 6.4.1. Social background of women workers

#### Origin

The majority of women workers, some 60% of a total sample population of 170 workers come from urban Guadalajara. Another 22% were born in the state of Jalisco. The percentage of migrant workers in the larger and medium-size factories is on average 27%. This is almost twice as high as the percentage in workshops (15%) and domestic outwork (19%) (Sanchez de Tagle and Hernandez Aguila, 1984: 71). The following table indicates the figures for the different types of production units.

Table 6.5. Migrants in the sample labour force in the Guadalajara shoe industry

| production unit | % migrants in sample labour force | sample labour force (numbers) |
|---|---|---|
| large factory | 24.2 | 62 |
| medium-size factory | 30.7 | 26 |
| workshop | 15.1 | 66 |
| domestic outwork | 18.9 | 16 |
| total | (av.) 21.2 | 170 |

Source: Sanchez de Tagle and Hernandez Aguila, 1984.

#### Personal characteristics

Women work in the shoe industry primarily when they are fairly young. 80% of the sample is under thirty-five years of age (Sanchez de Tagle and Hernandez Aguila, 1984: 72). Among the younger women, the percentages working in each type of production unit are fairly similar, with the exception of the workshop. Almost 50% of the working women in each type of production unit are less than 25 years old. Changes in distribution

occur among women between 25 and 35 years old. The percentage of women working in factories and doing domestic outwork remains similar, but the number working in medium-size factories and workshops drops. Women older than 35 disappear from large factories and domestic outwork, but once again increase slightly in workshops and remain at previous levels in medium-size factories. These figures suggest some movement between different types of production units, during the different phases of the woman's life cycle. This suggestion will be further considered below, taking into account number and age of children.

Table 6.6. Women workers by age and type of production unit

| | large factory | | medium factory | | workshop | | domestic outwork | | total |
|---|---|---|---|---|---|---|---|---|---|
| | no. | % | no. | % | no. | % | no. | % | no. |
| Age | | | | | | | | | |
| <25 | 29 | 47 | 11 | 42 | 34 | 67 | 11 | 48 | 95 |
| 25 - 35 | 26 | 42 | 8 | 31 | 10 | 15 | 10 | 43 | 54 |
| > 35 | 7 | 11 | 7 | 27 | 12 | 18 | 2 | 9 | 28 |
| Schooling | | | | | | | | | |
| None | | - | 2 | 8 | 3 | 5 | 1 | 4 | 6 |
| Unfinished primary | 7 | 11 | 13 | 50 | 23 | 35 | 7 | 30 | 50 |
| Finished primary | 34 | 55 | 4 | 15 | 25 | 38 | 6 | 26 | 69 |
| Some secondary | 10 | 16 | 5 | 19 | 10 | 15 | 1 | 4 | 26 |
| Further | 11 | 18 | 2 | 8 | 5 | 8 | 1 | 4 | 17 |
| Marital status | | | | | | | | | |
| unmarried | 30 | 48 | 11 | 42 | 39 | 59 | 4 | 17 | 84 |
| single mother | 13 | 21 | 5 | 19 | 7 | 11 | 2 | 9 | 27 |
| married | 18 | 29 | 9 | 35 | 16 | 24 | 9 | 39 | 52 |
| widow | 1 | 2 | 1 | 4 | 4 | 6 | 1 | 4 | 7 |

Source: Sanchez de Tagle and Hernandez Aguila, 1984.

For certain types of production units, age is a criterion for admitting women. The large factory hires very young unmarried women according to fairly strict rules, since the management wishes to keep up the speed of the mechanized production line. They state that older women workers cannot keep up the working tempo during the whole day (Sanchez de Tagle and Hernandez Aguila, 1984: 129). In medium-size factories, the management is less concerned with age limits. There having a good personal relationship with their employees is thought more important, and their loyalty is valued more rather than speed of work. This difference allows women to more easily combine their productive work with periods of high family pressures. Workshops are similar to medium-size factories in their lack of concern with age limits. There is even more flexibility in terms of working tempo and working hours than in the medium-size factories. In domestic outwork employer demands are not age-related.

Schooling levels vary among women working the in different types of production units. In the large factory, 55% of the women have finished their primary education, and another 16% have completed part of secondary school. In the medium-size factory, only 15% have finished primary school, and 19% have had a few years of secondary education. In the workshops, 38% have been through primary school, and 15% have had some secondary school. This is actually a higher level of education than is found among the women in the medium-size factory. Among those doing omestic outwork, 26% had finished primary school, but only a very small proportion had had any secondary education. Table 6.6. shows the exact figures.

The marital status of women also varies somewhat by type of production unit. Overall, 49% of the women are unmarried, and 31% are married. 16% are unmarried mothers, and 4% are widows. When differences in marital status of women workers are compared over types of production units, the following picture emerges. In large and medium factories respectively, 48% and 42% of the women are unmarried. In the workshops 59% are unmarried, and in domestic outwork only 17%. The percentage of married women in the different types of production units ranges from a low of 24% in the workshops to a high of 39% in domestic outwork. Single mothers constitute around 20% of the women working in large and medium-size factories. Single mothers and married women together constitute a higher percentage of working women in the two types of factories than in workshop and domestic outwork. This is somewhat surprising, given the general assumption that more married women would work in small-scale production units (see Table 6.6.).

A statement often made is that women work in small-scale production or domestic outwork when their children are small, so as to be better able to combine child care and productive work. The data from this sample do not show this trend. Rather surprisingly, one-third of the children of women working in the large factory were under three years old. In the medium-size factories, this was 22%, in the workshops 13%, and in domestic outwork 14%. Children between the ages of four and twelve constitute 48% of the children of women working in the large factories. This figure is 39% for women workers in the medium-size factories, 41% for those in the workshops, and 59% for those in domestic outwork. From these figures (in Table 6.7.), it cannot be deduced that having very small children effectively hampers women from doing factory work. The information given indicates that child care is carried out by various family members. There does not seem to be a crèche linked to the workplace.

Table 6.7. Age of children by type of production unit

| age groups | large factory | | medium factory | | workshop | | domestic outwork | | total |
|---|---|---|---|---|---|---|---|---|---|
| | no. | % | no. | % | no. | % | no. | % | |
| < 3 years | 24 | 33 | 11 | 22 | 13 | 13 | 6 | 14 | 54 |
| 4 - 12 | 35 | 48 | 19 | 39 | 42 | 41 | 26 | 59 | 122 |
| > 12 years | 14 | 19 | 19 | 39 | 47 | 46 | 12 | 27 | 92 |

Source: Adapted from Sanchez de Tagle and Hernandez Aguila, 1984.

Employment of fathers and husbands

Some indication is given of the types of employment held by fathers and husbands of the women workers. Unfortunately, the data are not disaggregated to show the type of production unit in which the women work. The largest single group of fathers also works in the shoe industry (19% of all fathers). Other relatively large categories of work were wage worker (15%), farmer (8%), trader (8%), and unemployed (8%). A large group of husbands also work in the shoe industry (36%): the second largest category is wage worker (14%). Other categories are chauffeur (10%), mechanic (7%) and trader (7%) (Sanchez de Tagle and Hernandez Aguila, 1984: 78). In general, these figures indicate that a major proportion of the families already worked as wage labourers in the previous generation. Unfortunately, the group of short-term or casual wage labourers among them cannot be further distinguished.

Which factors influence the allocation of women among the different types of production units? The most restrictive type of production unit is supposed to be the large factory. There both level of education and marital status officially play a role in access to employment. Management prefer young unmarried girls with a relatively high level of education, on the assumption that a) their work skills will be higher, and b) that their domestic responsibilities will be less apt to interfere with their factory work. There is a clear difference in level of education between women working in the large factory and in other types of production units. However, this does not apply to marital status, where half the factory workers are single mothers or married. In fact, there is more of a preponderance of unmarried young women in the workshops. The age of the women's children also does not seem to have very much effect. 33% of the women factory workers' children were under three years of age, and 48% between 4 and 12. Only in domestic outwork is the percentage of children higher.

6.4.2. Gender division of labour

Having considered the social background of the women workers in relation to access to employment, the gender division of labour within each type of production unit will be examined next. The following aspects are included: recruitment, division of functions, skills, workloads and wages, labour mobility, and mobilization.

Recruitment

In the large factory, long-term wage labour is recruited (9). Two channels are normally used for recruitment. The first is the contract section of the factory itself, i.e. lower management may choose from the group of people looking for work. The requirements which management has for potential workers include: more than 16 years old, a primary education certificate, and, in the case of women, being unmarried and having no children (Hernandez Aguila, 1983: 54). These requirements are adhered to more or less strictly according to management needs. An initial probation period of three months is usual, which can be extended for another three months.

In the past, apprenticeships in the factories were common. Skilled workers would have either their own children or other youngsters working with them to learn the required skills. They were not paid by the factory.

However, the amendment of labour laws ended this system and required employers to pay apprentices minimum wages (Hernandez Aguila, 1983: 13-14). Now apprentices are rarely used in the factories.

The second channel of recruitment is via the trade union, a channel which is commonly used by male workers. For women workers, it is more difficult to call on the trade union for help. Only if they are single, or single mothers, or have special ties of loyalty to the local trade union leader will the trade union help them.

In the medium-size factory, long- and short-term wage labour is used. Experienced workers are generally recruited. In this way, management avoids the six-seven month training period required to learn a particular function, and the concomitant lower production rates of the worker. Nevertheless, there is a formal probation period of one to three months. The workers recruited have usually learned their skills in the workshops or in domestic production (Hernandez Aguila, 1983: 62).

In workshops, several different types of labourers are recruited. Short-term wage labour, apprentices, domestic outworkers, and unpaid family labour are all used conjointly. Recruitment is usually based on personal recommendation to the owner/manager of the workshop. Within the workshop, short-term and casual wage labour is primarily used. For work outside the workshop, domestic outworkers are recruited for parts of the production process. These can be either men or women, depending on the type of work (Hernandez Aguila, 1983: 70).

Extensive use is made of apprentices. In fact, workshops are considered to be the main locus of training for workers in all sorts of functions in the industry. Apprenticeships can last for as long as a year, until the employer decides the worker is sufficiently skilled (Hernandez Aguila, 1983: 63). Apprentices who have learned their skills here go on to work in factories or other workshops, or as domestic outworkers. From the information available, it is difficult to discern whether there are large differences in the recruitment of men and women as apprentices, either in numbers or functions. In any case, women find work as apprentices in finishing.

In domestic outwork, recruitment is done primarily on the basis of personal relationships. Some domestic outwork is contracted indirectly by factories, who put out work via their employees to the wives or mothers of those employees. Workshops most often subcontract production in the form of domestic outwork using both men and women workers, putting out one function to machetero's and their families, and shoes to be finished to women working at home. A family member skilled in a part of the shoe production process will recruit other family members to help in his/her work process. Men may recruit their sons, more or less as unpaid apprentices. Women domestic outworkers may recruit children and neighbours when they themselves have too much to complete within the time limits set. Thus neighbor women too often function as apprentices.

The types of labour relations within the industry vary considerably. In large and medium-size factories, the predominant labour relations are long and short-term wage labour inside the workplace. There is a certain amount of subcontracting out to workshops and homeworkers in the form of disguised wage work. In workshops wage labour, unpaid family labour and apprenticeship labour is used. This is also combined with a large amount

of production work subcontracted to domestic outworkers. Domestic outworkers work in a disguised wage labour relation, and themselves often make use of unpaid family labour.

When one examines relationships among different types of production units, owners/managers of workshops can be classified as dependent producers for the trade within the industry. These units lack their own access to a number of inputs, and their own channels for sale of the product.

The differences in recruitment of men and women can only be described in qualitative terms, as differences in percentages of the labour force are not given. In the factories, there is a difference between men and women workers in the length of their wage labour relations. Although both can be categorized primarily as long-term wage labour, the situation for women workers is less certain, due to restrictions posed by management on their family situations. In the workshops, the most common type of labour relation is that of short-term wage worker, domestic outworker, or unpaid family labour. The impression is that women are recruited more extensively as domestic outworkers than men; however, this should be further investigated. In domestic outwork, women work primarily as disguised wage workers and unpaid family workers. Recruitment of apprentices is an important form of cheap labour, but does not readily fit into any of the labour categories used.

Division of functions

The division of functions varies a great deal among the different types of production units. In the large factory, a series of specific functions may be distinguished among each of the five major segments of the production process. A total of 87 production functions are found. In cutting, seven functions are found. In stitching, there are 17 functions. In shoemaking, largest number of sub-divisions are made; 29 functions. In lasting and bottoming, there are 17 functions. The same number of functions is found in the finishing department. In the large factory, the finishing department is peopled exclusively by women. Only the supervisor is male. Women also work in the stitching department, and do lasting and bottoming in relatively large numbers (Hernandez Aguila, 1983: 89) (10).

In the medium-size factory, six to eight functions are distinguished within the finishing department. The extent to which functions are specified within other departments is not indicated. The available information suggests that the sub-division of functions is substantially less here than in the large factory. The way in which women participate in the production process is said to vary a great deal; unfortunately, it is not indicated what type of variations occur.

In the workshops, functions are much less divided. Usually workers carry out one major segment of the production process from beginning to end (de todo a todo). Women primarily do finishing. Hernandez Aguila suggests that segregation in the workshops is rather high, and that it is difficult for women to gain access to other functions which are considered more skilled. This is corroborated in the case study by Escobar (1986: 138 ff.), in which the women workers only carry out finishing.

In domestic outwork, functions again correspond to the major segments of the production process. Although no figures are given, there is also a substantial amount of gender segregation in domestic outwork. Women are

particularly concentrated in finishing and men in finishing. Table 6.8.indicates divisions of function among the different types of production units.

Table 6.8. Sub-division of functions within major segments of the production process by type of production unit

| major part | large factory | medium factory | workshop | domestic outwork |
|---|---|---|---|---|
| cutting | 7 | ? | 1 | 1 |
| stitching | 17 | ? | 1 | 1 |
| shoemaking | 29 | ? | 1 | 1 |
| lasting and bottoming | 17 | ? | 1 | 1 |
| finishing | 17 | 6-8 | 1 | 1 |

Source: Hernandez Aguila, 1983.

Skills

To what extent do particular functions require special skills, and to what extent are these skills recognized? Cutting and stitching are major parts of the production process, which management recognizes as requiring skilled workers. Other parts of the production process, such as finishing, in fact depend to a large extent on the skill with which they are carried out, but are not officially recognized as skilled functions. Lasting and bottoming are considered unskilled work (Hernandez Aguila, 1983: 39-40).

In the large factory, women workers have previously been concentrated in the unskilled finishing function. However, in recent years they have been increasingly gaining access to other functions traditionally reserved for male workers in the cutting and shoemaking departments. As these functions are considered to be skilled, this implies that women currently not only have access to a greater number of functions within the factory, but also to functions which are recognized as being skilled. In principle, they are gaining ground in comparison with men workers.

However, this access to more, and more skilled, functions has gone hand in hand with a further fragmentation of the production process, in which each function has come to consist of a simpler operation than before. Male workers often did not accept this de-skilling of their work, and looked for alternative employment. Up till 1982, attractive alternative employment for male workers existed in other industries. It remains a question to what extent this situation still obtains after the 1982 crisis.

There is insufficient information available on medium-size factories to further explore the questions of existing and changing skills of women and men workers.

In the workshops and domestic outwork, most people still have (and acquire) 'craft' skills. Here this denotes that one person carries out an entire major segment of the process (de todo a todo). Training periods for the various functions are fairly long (up to a year), and are incorporated into a system of apprenticeships. The use of apprenticeships

is particularly extensive in workshops; primarily children and young people are trained. Women workers also learn their skills in this manner, but have little access to officially recognized apprenticeships. Given the fairly strict division of labour within the workshops, this suggests that women will primarily be able to learn skills for 'finishing', and will not be able to learn the craft skills necessary for other parts of the production process.

Workloads and wages

In the factory, there are two shifts. The early shift is from seven o'clock to three o'clock in the afternoon, and the second shift is from three until ten o'clock at night. Women and men work in both shifts, as labour laws allow women workers to do industrial work until ten o'clock at night. The women in the finishing department work slightly shorter hours than the other workers in the factory, due to the exigencies of the production process.

Wages are paid on a weekly basis. In the large factory, the legally determined minimum wages are paid as a basic salary. In addition, a piece rate is paid which differs by department. In some departments, the work rate is determined by the individual worker, and so is the piece rate payment based on it. In the finishing department, however, for the number of pieces produced to be higher, the whole production line must increase its speed. The women workers have no control over the speed; thus they have little control over the level of wages, which is based on the piece rate. In the large factory, other salary payments include vacation money, overtime, a seventh day payment, Christmas gratification, and eight weeks salary as compensation for a rising price index. At the time of the study, the basic salary paid to women working in finishing was 1300 pesos per week (in 1982). The amount of salary on top of that varied per week.

In the medium-size factory, the working day is between 8.5 and ten hours, longer than in the large factory. There are strong sanctions against coming in to work late, or staying away without warning. There is great variation in salary levels, both among production units and among workers in one unit. To begin with, workers on probation (an initial period of one to three months) receive less than minimum wages. After this period, a minimum salary is paid. On top of the basic salary, piece rates are paid for the goods produced. This situation obtained in half the units covered in the sample; in the other half, only piece rates were paid for the work done (Sanchez de Tagle and Hernandez Aguila, 1984: 55). Generally the employers pay health insurance for their workers. In the sample, 25 out of 26 women workers in this type of production unit were insured with the IMSS (Sanchez de Tagle and Hernandez Aguila, 1984: 74). Other payments usually made by employers include vacation money, and a bonus (aguinaldo). Most workers also belong to a union and come under collective labour agreements. The women working in the finishing department received between 1300 and 2500 pesos per week in the period studied. Generally, women receiving the higher salaries had worked longer periods for a particular production unit, or had a job as quality controllers (revisors).

In the workshop, working hours vary from 10 to 12 hours per day. A certain amount of work is set as a standard, and the worker must complete it, regardless of how long he or she works. This implies that the employer may be somewhat flexible about the time of arrival at work;

also implies that the employer does not pay for overtime. Further, for women workers in finishing, it means longer hours of work because the piece rate is very low in comparison to other functions (Sanchez de Tagle and Hernandez Aguila, 1984: 52).

There is more variation in wages than in the medium-size factories. To begin with, some units pay only piece rates and no basic salary. This was the situation for 14% of the women workers covered in the sample. It is not known what percentage of male workers were in the same situation. Secondly, there are variations according to the model of shoe produced. Generally, the higher quality the shoe (the greater the skills needed to make it), the higher the piece rate payment. Thirdly, there are differences in payments between workers in one and the same unit, doing the same work. Presumably the differences in payments at this level are due to the individual negotiations between worker and employer (Sanchez de Tagle and Hernandez Aguila, 1984: 56). The highest wage levels mentioned for women working in finishing are between 2500 and 4000 pesos weekly. Finally, there are differences in salary level due to the irregular supply of work. There is no daily guarantee of sufficient numbers of shoes to be made; seasonal fluctuations in production are high. Other payments made by employers are also more irregular than in the medium-size factories. Two-thirds of the women workers in the sample received a bonus (aguinaldo), and one-third vacation money and IMSS health insurance (Sanchez de Tagle and Hernandez Aguila, 1984: 74).

In domestic outwork, the number of hours worked on daily can hardly be calculated. Payments are made on a piece rate basis, and looking at the final level of payment is the only way to determine the number of hours worked. For women working in finishing, it is calculated that the working day is seldom shorter than eleven or twelve hours (Sanchez de Tagle and Hernandez Aguila, 1984: 53).

The variation in wage levels is also high. 63% of the women workers received no basic salary, but only piece rate payments. Wage levels are affected by the type of shoe made, seasonal fluctuations in production of shoes, and individual negotiations. In domestic outwork, there are also workers who receive no wages at all. Children, young men and women, and married women can all be unpaid family workers. During their study, Sanchez de Tagle and Hernandez Aguila (1984: 56) found that prices per pair of shoes varied between 5 and 20 pesos per pair. Other payments received by the women workers in the sample included a bonus for one-third of the women, vacation money for one-fourth, and medical service for 12%. Table 6.9. indicates such payments by type of production unit.

Table 6.9. Women receiving non-wage payments from employers

| payment | large factory | medium factory | workshop | domestic outwork |
|---|---|---|---|---|
| bonus (aguinaldo) | 62 | 22 | 41 | 6 |
| overwork | 62 | 6 | 11 | - |
| utility costs | 62 | 11 | 7 | - |
| vacation | 62 | 22 | 22 | 4 |
| seventh day | 62 | 15 | 5 | - |
| IMSS (health insurance | 62 | 25 | 24 | - |
| medical service | - | - | 17 | 2 |
| Total possible | 62 | 26 | 66 | 16 |

Source: Sanchez de Tagle and Hernandez Aguila, 1984.

Can it be said that women are recruited as a cheap labour reserve? In the factories, women previously had access only to functions which were less skilled and lower paid than those of men, so that it is difficult to speak of direct gender discrimination. Now that women are gaining access to more and skilled functions, presumably the differences between women and men in average salary levels within the large factory will become smaller.

In workshops, it is clear that women wage workers are paid at lower wage levels both at recruitment and throughout their employment than most men wage workers. Although both women and men carry out seasonal and irregular work, and the unfavourable working conditions and low income levels apply to all, there is a difference in the level of acknowledged skills and functions which they carry out. The men are usually workers with recognized skills in shoemaking. The women are 'adornadora's', finishers performing work that is considered to be unskilled.

Apprentices form a separate category of labour relations. There is little concrete information on the differences between men and women in terms of access to apprenticeships in different functions, nor on varying levels of payments.

In domestic outwork, there are differences in wage levels between men and women, based on differences in their functions when they are working as disguised wage workers. In addition, much use is made of unpaid family labour, most often carried out by women and children. In this type of labour, young children are not paid, but a differentiation by gender is made for older children. Older sons receive payments, but older or married daughters 'helping' their mothers do not.

In the different types of production units, women are generally found to be working as a cheap labour reserve, when it concerns wage labour in the various types of production organization. This is not based on direct gender discrimination, but is related to definitions of skills and to values accorded different skills. When they work as unpaid family workers, women's position within the household itself leads to a lack of remuneration.

## Labour mobility

Labour mobility is the pole opposite labour security. In Guadalajara the extent to which a worker desires either mobility or security depends on several factors: gender, age, marital status, perceived employment opportunities, and occupational skills. In general, women workers want a higher degree of job security than men. Older men prefer a higher degree of job security than young men. This is related to a) their greater difficulty in finding a job equal to the one they have, and b) the family they usually have to support. Young men often change jobs, and experience little difficulty in finding other work (Escobar, 1986: 279). Men have more and different employment opportunities than women. Finally, the higher the occupational skill level, the more ready workers are to either change jobs or to strike out on their own.

Obviously, the degree of job security also varies by type of production unit. In the large factory, the majority of workers are permanent wage workers. This applies to both men and women. In times of high demand within the plant, there is some use of casual wage workers and disguised wage work for the more uncertain and variable types of products. Women workers want greater job security than the employers are willing to give.

Although the women may have labour contracts as permanent worker, factory managment tries to ease out older workers on the assumption that they cannot keep up the pace of production on the line.

In the medium-size factory, the majority of workers are permanent wage workers. However, they are not bound by collective labour agreements, but rather by individual ties of loyalty to the employer (who may be a 'compadre' to his workers). The sons of the employer, when they become managers of production units, often show a more 'professional' attitude towards workers. This means that they wish to separate the personal ties from work ties. As a result, labour relations conflicts are more likely, and sharper, than before.

In the workshop, most men and women are short-term wage workers. Only a few very skilled workers may have a higher degree of job security, negotiated individually with the workshop owner. Women workers do not want to change jobs, because it involves new training and mutual confidence-building with the workshop owner. They will change, however, when demands are made by the owners which they find unacceptable. These include changes in hours worked, workload and piece-rate payments.

The owners of the workshops can be characterized as dependent producers, being mostly skilled workers who have started producing for one or two clients. Initially, the workshop owner may be nominally 'independent',in the sense that he does not have a fixed client who buys his products, but in the eyes of most producers that is a very unfavourable position. Both men and women can begin workshops; however, the number of skilled men is larger than the number of women. Beginning a workshop is not a permanent transition. When the workshop does not produce sufficient income or debts are incurred, it is quite possible for an owner to go back to being a wage worker.

In domestic outwork, there are many disguised wage workers, including many women. These women work at home finishing shoes, when work is received from middlemen, their husbands, or from workshops. These women will try to work for various workshops and middlemen to minimize the risk of fluctuating demand; increasing the number of subcontractors giving them work enhances their security.

## Mobilization

There are different types of trade unions in the shoe industry. There are occupational unions, based on the similarity of profession, occupation, or specialized skill of the members. There are also company unions, based on the membership of workers of two more enereprises in the same sector. Finally, there are industry-level unions. In Jalisco state, there are 66 unions associated with the shoe industry. 25 are occupational unions, 25 are company unions, and 16 are industrial unions (Hernandez Aguila, 1983: 73).

There is no national trade union in the shoe industry. The occupational unions are locally run, have a hierarchical internal structure, and maintain fairly strict control over their members. The company unions are, by their very nature, dispersed. Delegates to the union are usually appointed by the union leaders in the firms. Most of the unions at the company level in the shoe industry have been set up by management, in order to control the degree and manner of worker organization. Control over workers is maintained by blacklists of activist workers and strike leaders (Hernandez Aguila, 1983: 84 ff.). Workers therefore have little power.

In the large factory, the majority of workers are members of the company union (9873 out of a total of 11866 production workers in Calzado Canada). In both large and medium-size factories, there are relatively stable unions, whose leaders negotiate with the management. Workers are members of these unions, and know their leaders, although they do not elect them. Workers also do not undertake any activities on their own. Once a year, a meeting is organized by the leaders and management to inform workers on the new regulations that have been adopted concerning the tabulation of wages and other aspects of the collective labour agreement. There is no system for consultation of the workers.

Workers are not expected to participate in any negotiations the union leaders may conduct with the management. Furthermore, any initiatives by workers are heavily discouraged by union leaders. The exclusion clause is invoked by such leaders as a weapon against active participation by union members. The problems of all workers apply particularly to the women who work in the finishing department. They are generally isolated from those working in other departments and scarcely informed of union activities (Hernandez Aguila, 1983: 86-87).

In the workshops the level of unionization is very low. In workshops with a union, often the workers do not know who their union leader is, or even that they are nominally members of a union. It is said that union leaders use such dormant relations only to reach the required number of members. The workers in a workshop can expect more from a good relationship with their employer than from a union, where personal help to them is minimal. This applies to the women in a workshop as well. In domestic outwork, there is no known unionization.

### 6.4.3. Changes in the gender division of labour

In this sub-section, the following possible changes in the gender division of labour are taken into account: substitution, de-skilling, marginalization, and casualization of labour relations.

Within the large factory, a process of reorganization of work has been going on, involving a) increasing sub-division of functions and b) more standardized machinery with greater control over the speed of the production line. Each separate function within the production process has become less complicated and requires fewer 'skills'. The men workers in the skilled functions who had been paid higher wages, did not accept this de-skilling of their functions and the accompanying wage reductions. In the period before 1982, this led to much higher turnover among men employees, and a sharp decrease in new applicants for jobs within the factory. The de-skilling of the factory jobs, coupled with attractive job possiblities in other industries in Guadalajara, led to a scarcity of labour that the factory management had not expected.

Management reacted in two ways. First, they began to recruit women workers for functions in all departments, rather than confining them to the finishing department. Women gained access to more skilled and better-paying functions than before. This meant that the gender division of labour at the functional level actually improved for women in the large factory. Secondly, the management instituted a system of internal promotion and greater differentiation of salary levels within departments, in order to attract skilled men workers back to the factory.

In the workshops and domestic outwork, there is still a strong differentiation between men and women workers (and apprentices) in functions and wage levels, based on the recognized 'craft' skills of trained men workers (Escobar, 1986: 170 ff.). Training of new craftsmen occurs via the apprenticeship system. Women have little access to skilled functions, and there is little evidence to suggest that this has changed significantly. In these types of production units there is little possiblity of substitution of women for men. The latter guard their favourable position as 'skilled' workers jealously. Women 'finishers' train other women to become 'finishers' as well, but in this part of the industry there is apparently little chance for women to acquire other skills.

De-skilling has obviously occurred within the large factory, as indicated above. However, it has occurred mainly in jobs previously held by men workers. Women in fact have increased access to a wider range of functions, although these are now less complex. For women, therefore, there has been an increase in access to more skilled functions. In workshops, women still generally lack such access to the functions recognized as skilled; there has been no de-skilling, but also no increase in access to skills. The available evidence suggests the same situation applies in domestic outwork.

Marginalization of women workers is not prevalent in the industry. In the large factory, the stability of work is relatively high for both men and women workers, and the improved access for women, both in terms of numbers of functions and wage levels, is an asset. Further, job turnover is not very high for most women workers in the large factory.

In workshops and domestic outwork, job instability is inherent in the type of production unit. Although the job instability for women workers as such may be higher or more dangerous (in terms of other job opportunities) than for men workers, there have not been essential changes in the degree of instability, nor changes in the relative instability of men and women.

The casualization of work occurs where parts of the production process are subcontracted to small units by large production units. This situation applies to only a small degree to the footwear industry in Guadalajara. Subcontracting occurs primarily between workshops, and between workshops and domestic outworkers. It is based on differences in machinery owned by each workshop, fluctuations in demand, and existing personal relationships between workers with different skills. Subcontracting is a process that has been occurring for some time, and there is no evidence of further casualization. Of course, historically the process has always been very 'informal' in the sense that it occurs illegally, and fluctuates widely. It occurs for functions carried out by men as well as women; and no particular changes in the extent or types of work subcontracted can be clearly seen.

Large and medium-size factories do subcontract, but this seems to be a very minor, irregular activity. When it does occur, it is likely to be in the 'finishing' part of the process, and as such pertains specifically to women's work. Such casualization of work puts women in the position of 'disguised wage worker' or 'unpaid family worker'. In contrast to other industries, this process is not growing fast. From the data available, this could be due to the fact that small-scale production has always been prevalent in this industry, and that the shoe trade/buyers have actively discouraged large-scale production, particularly the development of

independent sales channels linked to large factories. Informal labour relations have been maintained within the shoe industry, but not increased markedly.

## 6.5. Conclusions

What conclusions can be drawn from the foregoing discussion? In this section, the characteristics of the different types of production units are first discussed. Secondly, the gender division of labour and related trends are recapitulated.

1. To begin with, all types of production units experience scarcity of raw materials. In addition, small units experience greater problems with price fluctuations.
2. Secondly, the type of products produced vary. The larger the unit, the more standardized the type of shoe produced.
3. Thirdly, the technology and production process are essentially different between large and medium factories, on the one hand, and workshops and domestic outworkers on the other. The former use a totally mechanized production process with maximum differentiation in functions, and a large degree of control over the production of each worker; the latter are characterized by varying degrees of craft production, in which the skilled worker has more control over the production process if not over input and output channels.
4. Fourth, the largest factory has direct sales access to the public by way of its own stores. Workshops are very dependent on traders/middlemen and wholesalers. Domestic outworkers are primarily linked to workshops.
5. Finally, the characteristics of the different types of production units described here are not mutually exclusive. There is a certain amount of overlap in various aspects of production. One type of unit can also evolve into another type over time.

What can one say concerning the gender division of labour?

1. First, women are found in all types of labour relations, ranging from permanent wage work to unpaid family work. The majority of women work in temporary wage work, disguised wage work (domestic outwork) and unpaid family work. The permanent wage workers found in large factories are a small minority among all women workers.
2. A comparison with men workers can at present be made only within each category of labour relations, and not overall. Men workers predominate among permanent wage workers, temporary wage workers in workshops, and as dependent producers. The information on apprentices as a category cannot be considered conclusive.
3. The division of labour between men and women is most pronounced in workshops and domestic outwork. In large and medium-size factories, women are gaining access to more and more skilled functions.
4. Women are recruited as a cheap labour reserve in both wage work and unpaid family work. They are not discriminated against directly on the basis of gender, but on the basis of skill definitions and valuations of particular skills.
5. Substitution of women is occurring in the large factory in combination with work reorganization, further fragmentation of the production process, and simplification of individual functions.

6. De-skilling has occurred for men, in conjunction with access to more skills for women workers in the factory. In other types of production units, neither de-skilling nor re-skilling has occurred.
7. There is currently no marginalization of women workers in the different types of production units, nor is there a trend toward a particular type of labour relation.
8. Casualization of work is not a new process, as short-term and casual wage work has always been a basic component of this industry. The majority of women work in such labour relations. In the factory, the degree of access of women to formal wage labour has increased.

Footnotes to Chapter 6.

(1) For a further discussion of methodological issues, see Chapter 2.

(2) A number of authors state this, although official figures do not reflect extensive women's employment. Within UNIDO, the Senior Officer in the Leather and Leather Products Section confirms that usually 50-80% of all employees in the industry are women (personal communication).

(3) Nevertheless, statistics available on this industry are not reliable and the various sources of figures do not agree (Comercio Exterior, 1980).

(4) Production figures from various sources do not at all agree. The following table indicates various estimates of shoe production in the middle seventies. Two of the sources agree in growth rates, if not in absolute figures. Therefore, the latter of these has been used for the composite table.

Table 6.10. Various estimates of shoe production in Mexico (in millions of pairs)

| year | 1 | growth rate | 2 | growth rate | 3 | growth rate | 4 | growth rate |
|---|---|---|---|---|---|---|---|---|
| 1974 | 140.0 | | 125.0 | | 181.6 | | 163.5 | |
| 1975 | 148.8 | 5.9 | 125.0 | 0.0 | 195.3 | 7.0 | 175.8 | 7.0 |
| 1976 | 157.3 | 5.4 | 135.0 | 7.4 | 210.0 | 7.0 | 189.0 | 7.0 |
| 1977 | 167.0 | 5.8 | 150.0 | 10.0 | 191.1 | -10.0 | 172.0 | -10.0 |
| 1978 | 185.5 | 9.9 | 165.0 | 9.0 | 205.0 | 6.8 | 184.5 | 6.8 |
| 1979 | 199.2 | 6.8 | 174.0 | 5.2 | 210.0 | 2.4 | 189.0 | 2.4 |

Sources: 1. Department of Economic Studies, Seccion de Investigacion de Banamex y Guia de Mercados De Mexico, 10th annual ed. Edit. Marynka, 1977-1978, p. 205.
2. National Chamber of the Shoe Industry.
3. Centre for Research and Technological Assistance of Guanajuato (CIATEG)
4. Comercio Exterior, vol.28, no.7, 1980, Mexico.

(5) This is in contrast to many other industries, which show a predominance of foreign capital. Examples include tobacco, food oil products, chemicals, pharmaceuticals, cosmetics and electrical machinery (Arias, 1980b: 179).

(6) The scarcity of hides as a raw material is a global problem (ILO, 1985: 5-6).

(7) The CTM, established in 1936, is the federation of trade unions currently most closely affiliated with the PRI. In 1952 several non-CTM unions organized as the Confederacion Revolucionaria de Obreros y Campesinos (CROC). The CTM and CROC are rival federations

composed mainly of small unions in traditional sectors. There are also national industrial unions for particular industries, with whom both have an uneasy relationship. The unions show internal conflicts as well, between leadership and rank and file members (Roxborough, 1984: 26).

(8) The more recent industrial censuses do not indicate small-scale establishments.

(9) Hernandez Aguila does not give precise figures by type of production unit concerning the types of labour relations and their implied degree of security, nor indicates very precisely the differences by gender. However, she does give overall indications of the extent to which certain types of labour relations are prevalent in each type of production unit.

(10) Unfortunately, precise figures for the percentage of women workers as a part of the total labour force broken down by department are not given in the Hernandez Aguila study.

Methodological note

A short methodological note is in order here. The different types of production units given by each author have been compared to determine the extent to which they agree on firm structure within the industry. The first comparison relates to the situation within Guadalajara itself as described by different authors; the second to the situation within Leon. A third comparison is made regarding the possible variations between Leon and Guadalajara, to see whether the industry has developed differently or is at a different stage of development in the two cities.

Within Guadalajara, Alba (DEPRODE, 1982) and Hernandez Aguila (1983) have given extensive descriptions of types of firms. Alba bases his typology on two criteria: number of employees and sales values. On this basis, he finds seven types of firms, ranging from a family firm with less than five employees to a very large firm with more than 500 employees.

Hernandez Aguila (1983) distinguishes four types of production units, based on four criteria: degree of mechanization, type of labour process, labour control, and labour relations. These criteria mainly concern internal characteristics of the firm. The firm types are: large factories, medium-sized firms, workshops, and domestic outwork. She includes the number of workers in each type of production unit, making it possible to compare her account with that of Alba; his typology can be collapsed to agree with hers. The manner in which this is done is indicated in Table 6.11. Nevertheless, there is a difference between the two authors. Hernandez Aguila includes as her fourth category domestic outwork. Alba does not include outwork as such in his typology; thus one category of the two authors does not overlap. A third author, P. Arias (1980b), also has characterized shoe firms in Guadalajara, as domestic producers, small-scale producers, and large-scale producers. Her description of the largest shoe factory in Mexico - Calzado Canada - is particularly interesting and extensive.

Table 6.11. Alba/DEPRODE typology reduced to four firm types; agreement with typology of Hernandez Aguila

| Category Alba/DEPRODE | | correspondence Hernandez Aguila | |
|---|---|---|---|
| type of unit | workers | type of unit | workers |
| 1. family. | < 5 | family | 0 - 5 |
| 2. non-family | 6-15 | | |
| 3. workshop | 16-25 | workshop | 6 - 60 |
| 4. medium industry | 26-50 | | |
| 5. large manufacture | 51-100 | medium firm | |
| 6. large industry | 101-500 | | |
| 7. very large industry | > 500 | large firm | > 500 |

Note. The Alba/DEPRODE typology is further differentiated by the criterion of annual sales.

The descriptions of firm structures in Guadalajara show that a combination of internal and external criteria give a fairly precise insight into factors which influence the way firms operate. The various authors cited basically agree on the existing diversity of production units in the shoe industry, although they vary somewhat in the extent to which they include the more casualized systems of production.

The second question concerned the degree to which authors agreed on the types of firms found in Leon. Typologies developed on the basis of field studies in Leon, carried out by Arocena (1982) and Calleja (1984) were examined. Calleja bases her typology on the legal situation of employees and the social relations of production within the unit. She distinguishes four types of production units: the factory, the workshop, family production, and subcontracting workshop (taller de maquila). Arocena bases his typology mainly on the 'forces of production' and 'social relations of production' (Arocena, 1982: 50 ff). The aspects he mentions include tools, monetary resources, labour force employed, division of labour within the unit, and access to markets. He distinguishes four types of units: the factory, the petty-commodity workshops, domestic workshop and the maquila (subcontracting workshop). This brief survey indicates that, within Leon, the authors agree on the basic structure of the industry.

A third methodological question was to what extent Guadalajara is unique, or shows similarities to Leon and the Districto Federal. In order to decide this, the typologies of firm structures made for the two cities were compared on the basis of the field studies made by the authors mentioned above. A comparison of various factors included in each typology indicates that in Leon the authors distinguish between domestic production and domestic outwork, whereas Hernandez Aguila (1983) includes only domestic outwork in her study, and Alba disregards it.

Although the coverage of the various authors varies, the studies do not indicate radical differences between Guadalajara and Leon.

# PART III. TOWARD AN UNDERSTANDING OF WOMEN'S ROLE IN INDUSTRIALIZATION

## CHAPTER 7. FORMS OF PRODUCTION, WOMEN'S EMPLOYMENT, AND THE HOUSEHOLD

In Part III, I return to the original questions posed at the beginning of the study, and draw conclusions from the answers provided by discussion of the existing literature and the three case studies given. The central themes of the study have been: 1) the characteristics of different forms of production and the categories of labour employed in them, 2) the extent of labour market segmentation, 3) the extent and nature of women's labour in the various types of production units, and the changes therein, and 4) the impact of women's productive labour on their position within the family-based household. The material from the case studies suggests answers to the questions posed, and allows me to make a first attempt at systematizing the themes taken up here. The discussion in this chapter is organized around the themes as discussed in Chapter I and the propositions from Chapter II.

### 7.1. Forms of production

In this section, the extent to which different types of production units show systematic differences in the way they function is considered. The main comparison is among large-scale, small-scale and artisanal production units from several agro-industries. A comparison among production units within a single industry provides information with the least amount of 'interference' from differences inherent in the raw materials or factor intensity specific to an industry. However, the comparison among similar types of industries also made here makes it possible to explore the extent to which generalizations can be made within a broader category of industries.

In this study, I have looked at certain agro-industries in Third World countries, which, as in the industrialized countries, are generally characterized by the local availability of raw materials, relative labour-intensiveness of the production process, wide variation in technology used, relatively low capital investment, and geographic dispersion of production units. In the classification developed by Evers and de Groot (1978: 27-42), agro-industries come under the category of 'assembly' industries, with a high factor intensity in labour and low intensity in capital, low to intermediate intensity in technology, and intermediate intensity in natural resources. The conclusions of this study apply only to this type of industry. Only future research will indicate to what extent conclusions can be generalized to other types of industry.

Three main forms of production are usually distinguished: large-scale capitalist production, small-scale production and artisanal production. The criterion used for distinguishing among them is the extent to which ownership and production have been separated. Complete separation is characteristic of large-scale production. In small-scale production, the owner generally also participates in production, as manager or producer. The case studies show, however, that one needs to make a further distinction at least within the category of artisanal production units, between domestic outwork and household production. In both cases the owner of the machines or tools used is the producer. However, domestic outwork refers to a person working at home as a 'disguised wage worker'; i.e. the

supply of work comes, directly or indirectly, from subcontracting firms and the transformed product is delivered back to the same firm. Household production refers to producers working with unpaid family labour who receive their supply of work from commercial suppliers and sell it to other commercial buyers. In this and the following section, the implications of this distinction for working women will be shown in relation to characteristics of the labour proces.

Let us examine to what extent systematic differences exist among these types of production units. I have looked at both external factors and factors internal to the various production units. External factors include the forward and backward linkages of the unit. Internal factors include the technology used, the divisions in the production process, the types of labour used and the degree of worker differentiation by gender. The model of petty-commodity production presumes that large-scale production is dominant, and small-scale and artisanal producers largely dependent on the large-scale sector for most factors involved in production.

The case studies indicate a much more heterogeneous model. Both small-scale and artisanal production units show more dependency in forward and backward linkages than in internal factors. It is interesting to note that Harriss (1982: 997-999) has found similar results for the engineering industry in south India. The following paragraphs illustrate the situation more specifically by type of factor.

A basic external problem faced by all types of production units is scarcity and price fluctuations in the supply of raw materials. The reactions of the different types of units vary, however. Large-scale units try to increase their control over their sources of supply, e.g. by incorporating suppliers into the firm as a whole, and attempt to reduce the price per unit by buying large quantities. Small-scale units usually get their raw materials from commercial sources or from subcontracting firms. They cannot exclude price hikes and irregularity in supplies, although they try to minimize this by close social links with their suppliers. This usually means a fair degree of dependence on the unit's regular supplier, with little chance to take advantage of possible competition among traders. This also applies a fortiori to artisanal production units. Dependence on subcontracting firms is inherent in domestic outwork: they supply the work, either directly or indirectly. In household production units, the producer in principle can draw raw materials from different intermediaries; however, some degree of dependence on one supplier is often sought to ensure a basic regularity of supply (and possible additional financing), as paying for raw materials is prohibitive for most households.

Sales channels are variable by nature. All types of production units sell to wholesalers, among others. In large-scale production units, wholesalers includes both domestic and exporting wholesalers; sometimes large-scale producers increase their control through ownership of retail shops. In small-scale and household production units, sales are through wholesale merchants or cooperatives (where these exist). Such commercial sales channels often also provide financing for the producers, creating a dependency relationship with them, which limits use of alternative sales channels. Domestic outworkers are by definition bound to one sales channel: namely, the intermediary or firm which provided the raw materials for transformation.

The case studies indicate that the basis for the great dependence of small-scale and artisanal production units on the merchants involved in their forward and backward linkages is the fact that such commercial sources also function as suppliers of working capital for the owners/producers. Let me explain this by going into the internal characteristics of the different forms of production, which include capital, technology and labour. Capital can be divided into investment and working capital. The former will be discussed below, under technology. Working capital is needed to pay workers, buy raw materials and provide upkeep for machines; it is money which needs to be constantly kept invested. As most small-scale and artisanal producers have only very limited sources of capital, they attempt to supplement their funds by borrowing.

Raw materials are the largest cost factor for all types of units, generally accounting for some fifty percent of the total working capital needed. As most small-scale and artisanal owner/producers have little or no access to institutional sources, they need to borrow working capital from private commercial sources - the suppliers of raw materials, who extend credit until the finished products are sold. In fact, wholesalers who buy the finished products may be the same merchants/financers who supply raw materials. This situation limits the income and profits from production for these producers, as interest rates are usually at usurious levels. This type of dependence on commercial capital - the merchant/financer - is extensive and important, and needs to be recognized more explicitly.

In this type of relationship, an escape from dependence is very difficult. Only those who have sufficient capital to invest in raw materials and thus not be bound to merchants/wholesalers can do so; they constitute a very small percentage of small-scale and household producers. Cooperatives offer an alternative possibility for escape from dependence on merchants/financers; however, this depends a great deal on their reliability and the extent of indebtedness of the producers.

Domestic outworkers are totally dependent on external relationships, both for supply of work and for 'sale' of the finished production. It is impossible for them to gain a greater degree of independence toward such external relationships as domestic outworkers; the possibility can be created only by making a transition to household production.

Let me now examine the extent to which factors internal to production units vary systematically, so that a general model of types of production units can be derived, taking into account the technology used, the divisions in the production process, and the concomitant division of labour (the last including the degree to which ownership and production have been separated, types of labour used, and the degree of gender differentiation).

Before doing so, a brief word needs to be said about differences among production units which stem from the constituents of their products, as these influence the internal structure of the units. Within the agro-industries studied, certain differences emerged between textiles and shoes on the one hand and shrimp processing on the other. The variability of supply in shrimp is much greater than for cotton and leather; this suggests that within agro-industries a further distinction can be made between those directly dependent on raw materials which are seasonal (food and beverages) and those with relatively more stable supplies (e.g. textiles, shoes, wood).

Products made by large-scale production units are much more standardized than those of small-scale and artisanal production units. The former usually make large batches of standardized production. If they are interested in producing products in smaller batches and greater variety, that type of production is often subcontracted to small-scale or artisanal production units. In small-scale production units in India, product range is usually limited to one product; in Mexico, some variety of products is made, limited by the skills of the producers and changes in demand. In household production, one or two products are made, depending on skills and demand; in domestic outwork, often only a part of the production process is carried out - and a complete product is not produced.

The technology used in the different types of production units varies systematically. In large-scale production one finds the greatest degree of mechanization, and a variety of machines, each intended for specific operations. A certain number of machines are imported (or made from imported designs). The splitting-up of operations is most extensive; this is often based on line production. In small-scale production units, machines and hand tools are used in the production process. The use of second-hand machinery acquired from large-scale production units is common; however, small-scale units making machines similar to those used by large-scale producers are alternative sources. Functional specialization is much less extensive than in large-scale production, and there is greater flexibility in division of operations. In artisanal production, the use of hand tools in carrying out the production process is common. There is a certain amount of functional specialization by age and gender in household production; and in domestic outwork gender is a decisive factor. This review of the data indicates that insofar as machinery is concerned, small-scale and artisanal producers are not very dependent on the large-scale sector.

Changes in technology used can only be traced for large-scale production units, as information on the history of small-scale and artisanal production units is too scattered and sporadic to allow any conclusions. In large-scale production units, increases in mechanization of production within the unit as well as increases in subcontracting production outside it have been found. The former is linked to attempts to achieve greater productivity in the production process. The latter is, as far as technology is concerned, linked to labour-intensive parts of the production process which cannot be easily mechanized, are too expensive to change, or in which the level of production fluctuates greatly. Thus, cost factors influence the direction of technological change, toward either mechanization and subcontracting.

Further, let me consider the extent to which production is subcontracted among the different types of production units. It is often posited that large-scale firms have a tendency to subcontract out parts of a production process or certain products. In the industries studied, the textile industry large-scale units subcontracted only to small-scale production units. In shrimp processing, subcontracting by large-scale units to artisanal units was found. In the shoe industry, large-scale units did very little subcontracting; rather, small-scale production units were found to subcontract extensively to domestic outworkers, in order to expand production. These results indicate that subcontracting shows more variety in form than supposed. Beneria and Roldan (1987: 34-35) also indicate variety in Mexico City: a chain of subcontracters going from

large-scale foreign-owned production firms, through domestic large-scale firms, to small-scale production units and domestic outworkers.

The final internal factor in the model of types of production units is the division of labour. Under this heading I include the extent to which 1) ownership and production have been separated, 2) different categories of labour are used, and 3) each type of production unit employs women. Later I will come back to other characteristics such as skills, wages and workloads, and degree of organization.

In large-scale production, ownership and production have been completely separated. In addition to production, which is carried out exclusively by wage labour, administration and management are extensive and stratified. In small-scale production, the owner is often a producer as well. The extent to which this is so varies with the size of the production unit. The larger the unit, the less the owner will be involved in daily production, and the more extensive his tasks involving the upkeep of the unit's external relations. In artisanal production, owner and producer are co-terminous, albeit that said producer is assisted by other family members.

The categories of labour distinguished in Chapter I were: long-term wage work, short-term wage work, disguised wage work, dependent producers, self-employed producers and unpaid family labour. The case study results show that this continuum is a good approximation of the situation found. However, further differentiation is needed within the categories of long-term wage work and short-term wage work. Within long-term wage work, one finds workers who actually have a relatively stable and secure contract and expect to work in the same unit for a long time, and those who have not yet gained the status of a long-term stable wage worker, but expect to obtain it in the future.

The category of short-term wage worker includes workers with varying degrees of insecurity in income and expectations which are rather essential to workers. Those in small-scale production whose jobs are not protected by labour legislation, but who actually work a fairly long period in one unit, are termed short-term wage workers. Those who are recruited on an even more short-term basis, or are not paid fully for their work are termed casual workers (see also Harriss, 1982: 993). This category includes apprentices, daily labourers and workers recruited for a certain period or amount of work other than daily hire. Apprentices have a somewhat longer-term prospect for work within one unit, but are paid very little. Labourers recruited on a daily basis have both low incomes and very little security.

To what extent are women recruited within the various categories of labour in each type of production unit? Here the description concerns the present situation; changes over time are discussed in section 7.3., in which I go into changes in the labour process. The question is answered by looking at the percentage of women workers to total workers per unit, and in more qualitative terms, at the various types of labour relations in which they work.

There are systematic differences in the extent to which women are recruited into the different types of production units. In large-scale production, they are generally 10-25% of all workers. In small-scale production, women are 25-50% of all workers. This includes various categories of labour: short-term wage workers, daily labourers, and unpaid family workers. In household production, they may be almost 50% of the

work force, mainly as unpaid family workers. In domestic outwork, women make up between 50-100% of the work force as disguised wage workers, and children work as unpaid family members.

Let us examine the categories of labour found in more detail. In large-scale production units, women are largely recruited as long-term wage workers. This applies more to the textile and shoe industry than to the shrimp processing industry - in the latter the seasonality of the raw material on which the industry is based influences all aspects of production, so that women are recruited to a greater extent as short-term and casual wage workers than in the other industries (2). In addition, a very small percentage of not-yet-secure wage workers is found in large-scale production, most of whom are aiming at long-term secure employment. Men are also primarily employed as long-term wage workers; however, among them, small numbers of apprentices are also found.

In small-scale production, women are employed as short-term wage workers and unpaid family labour in equal numbers. Small percentages also work as casual workers and apprentices in these units. For men the situation is somewhat different; their recruitment as short-term wage labour is much greater than their recruitment as unpaid family labour. In addition, male apprenticeships are quite common, which is not the case for women.

In household production, women are primarily recruited as unpaid family labour when the spouses work together. Only a small percentage work as casual workers in such types of production units. The male head of household can be characterized as a dependent producer. Children are mostly unpaid family labour as well, although older sons are paid a small amount for their work. In domestic outwork, men and women are recruited as disguised wage workers, and make use of their children as unpaid family labour. In the shrimp industry, the women are recruited extensively as daily wage labourers; again, this relates to the extreme irregularity of supply of raw materials. Generally, women's participation as domestic outworkers is much greater than that of men.

My first conclusion must be that the extent of women's participation in the production units is often greater than acknowledged by either producers/owners of the production units, or the workers in such units. This depends primarily on the type of labour relation under which women (and some boys and men) work. The more 'casual' the labour relation, the less it is explicitly acknowledged. Unpaid family labour is the category of labour most extensively denied by everyone concerned.

My second conclusion is that when women are compared within the various types of production units, in ech case they are generally recruited for more casual types of labour than men. They are also quite explicitly denied access to apprenticeships, a major channel by which they could 'graduate' to more secure and better-paying categories of labour.

In the following figure, the characteristics of the different forms of production are indicated systematically, summarizing the description above.

Figure 7.1. Forms of production and categories of labour

| | large-scale | small-scale | artisanal | |
|---|---|---|---|---|
| | | | household | dom. outwork |
| raw materials supplier | - some control over prices/ supply/ | - little control over prices/ supply/<br>- dependence on traders/sub-contracting firms | - little control over prices/supply<br>- dependence on:<br>- traders | - subcontracting firm |
| sales channels | - domestic/ exporting wholesalers | - wholesale merchants/ cooperatives | - wholesale merchants/ cooperatives | - subcontracting firm |
| working capital | - institutional sources | - dependence on private merchant financer | - dependence on private<br>- merchant financer | - in natura dependence on subcontracting firm |
| technology | - machines for each operation | - second-hand machines/hand tools<br>- little dependence on large-scale sources | - hand tools<br>- little dependence on large-scale sector | - hand tools |
| changes in technology | - mechanization within unit/ subcontracting to other units | | | |
| ownership/ production separation | - separation owner/workers | - owner=producer/ also other workers | - owner=producer/ unpaid family labour | |
| categories of labour used | - long-term wage workers; small % casual workers | - short-term wage workers; casual workers; unpaid family labour | - producer, unpaid family labour | |
| women's labour | - 10-25% of workers;long term wage workers | - 25-50% of workers short-term, casual and unpaid family workers | - 50% unpaid family workers | - 50-100% disguised wage workers |

## 7.2. Labour market segmentation

In this section, the question is to what extent systematic differences exist in the access of men and women to employment of various kinds. Two concepts are often used to examine this problem: the reserve army of labour and labour market segmentation.

In Chapter I it was found that the reserve army of labour can be divided into three sections: the stagnant, the floating and the latent. The stagnant includes the casually and irregularly employed. Obviously, this group is included in this study. The floating section includes those that are temporarily unemployed. The latent reserve consists of people thrown out of agriculture. Braverman (1974) particularly includes housewives within this category. This categorization of women does not seem very useful, as, in the countries under study, the housewife is rare. Besides, the concept defines women as an a priori 'reserve', rather than finding out how and when they are made so.

The concept of labour market segmentation is more useful, as it indicates the mechanisms by which people gain access to employment; this gives researchers a chance to determine more directly how systematic differences in men's and women's employment patterns emerge. Mechanisms influencing women's access to employment include two sets of factors: those related to her personal and family-based household characteristics, and those related to forms of production and class formation.

The case studies indicate that women's personal characteristics and household background influence their access to employment in the various types of production units. The factors considered were: family relationship of the woman, women's ages and level of education, number and age of children, membership in a community, and channels of access to employment.

Large-scale production units in the textile and shoe industries show striking differences in the groups of women recruited. In both industries, women were previously recruited when they were young, and they have remained for a fairly long period with the same employers. In the shoe industry, recruitment policy has changed to an emphasis on the recruitment of young, unmarried women, and a reduction in the number of older women. In the textile industry, a new generation of women has almost no access to jobs in the industry. This development is linked to changes in the labour process, to which I will return in section 7.3.

A current cross-section of women's access to employment in large-scale industry shows a majority of older women in the textile industry, and a majority of younger women (under 25 years of age) in the shoe industry (3).

There is a concentration of young, unmarried women in small-scale production. There their percentage is larger than in large-scale production. This is contrary to the expectation that older, married women would be more apt to work in this type of production unit, because here it is easier to combine child care with economic activities. This rather suggests that these women are learning their work on the job, for which there is more scope in small-scale production than in large-scale production (4). In domestic outwork, there is a concentration of young, married women. Here the proposition that married women with children will fall outside large-scale production is confirmed. The fact that half the women are younger than twenty-five also suggests that they have young children to care for. In household production, there is a much wider range of women workers in terms of age and marital status.

Older women are found as smaller percentages of all women workers in all types of production units. Gonzalez de la Rocha gives a possible explanation for this in the Mexican situation - namely, that older children can and do contribute to the family income and free their mother from the necessity of continuing economic activities (1984).

The influence of the level of education of women on their access to jobs in different forms of production is difficult to evaluate independently. In India, women in small-scale production have much higher levels of education than women in either large-scale or artisanal production. This is related more to women's access to schools than to generation or type of production unit; women from urban areas have had more education than those in the rural areas. Presumably this difference is gradually being eroded for the current generation of young women. In the Mexican situation, there is a visible decrease from large-scale production to domestic outwork in the percentage of women finishing primary school. This suggests that women with higher levels of education - at least in the current situation - have more access to jobs in large-scale production. However, that result must be weighed against the evidence from the Indian situation (in the textile industry) where education requirements are increasingly used to limit access to employment in large-scale production for everyone, and where women's access to jobs in large-scale production is limited on other grounds (labour legislation limiting women's working hours in combination with changes in the production process).

Together these results lead me to conclude that education is used as a criterion by employers when and where necessary to limit access to employment, particularly in large-scale production. However, the jobs themselves do not seem to require education to a particular level: the percentage of illiterate women and women with an unfinished primary education is substantial in all types of production units.

The role of children in determining the types of jobs to which mothers gain access has been measured differently in the Indian textile industry and the Mexican shoe industry, making it difficult to compare directly. In the Indian situation, the number of children per family does not differ substantially among women in the three types of production units. This does not support the idea that having a larger number of children inclines women to work in small-scale or artisanal production.

In Mexico, the ages of the women's children were considered. The expectation was that women with very young children would be more inclined to work in small-scale and artisanal production. However, the percentage of children younger than four is substantially higher among women working in large-scale production units than among women in other types of units. The percentage of children between four and twelve is lowest for women in small-scale production, ten percent higher for women in large-scale production and another ten percent higher for women in domestic outwork (reaching 59%). This leads me to conclude that having children presents a problem in any case, but that having young children does not lead women to leave their jobs in large-scale production. This is most likely related to the fact that a job in large-scale production is difficult to acquire, commands a high, and most important, a stable level of income. It is easier to arrange for extra child care than to regain a similar job.

The influence of community membership can be traced in the Indian situation in both textile and shrimp processing industries. Although

ethnic background plays a role in many regions of Mexico, this is not the case in the Guadalajaran shoe industry. Therefore that situation is not discussed here. In India, community membership is important in gaining access to jobs, regardless of the type of production unit. However, in large-scale production units, women of certain caste backgrounds have more access to jobs. In artisanal production, the degree of caste concentration among women is also substantial, but there it has more to do with the Indian heritage of caste-linked occupations.

In small-scale production, a very mixed caste background is found among women workers. This suggests that access to this type of production is relatively unstructured, and less limited. This is related to the high growth rate within the textile industry (powerlooms) and a relatively tight segment of the labour market, which results from the fact that men often go on to work in large-scale industry. It remains an interesting question whether with further development of small-scale production (in the textile industry) such relatively easy access will continue.

These results lead me to conclude that community membership remains an important factor not only in large-scale production, but also in artisanal production; in small-scale production this does not seem to be the case, but this remains to be studied in future research.

Factors related to forms of production and class formation also influence women's access to employment. The main aspects named by authors writing about India include brokerage and patronage systems. The case studies indicate that in large-scale production, the lower management of the firm act as brokers in recruiting workers. This applies presumably to both men and women; differences in access to this channel were not clearly spelt out in the case studies. The trade union forms a second brokerage system in which there is a clear gender difference in access: women have much less access to union channels than men.

In small-scale production, personal relationships with the owner/producer of the workshop are important. The labour market related to small-scale production does seem relatively open. In the case of the Indian textile industry, it is the woman's family, more than the employers who restricts access to certain jobs. This is related to the growth of small-scale production, and may change when such growth ceases in this industry.

In domestic outwork, brokers who distribute the work among women in their homes are the main channel for women's access to work; and they often operate at neighbourhood levels. In household production, women are mainly 'conscripted' on the basis of family relationships, and have little choice other than to participate in the household production. The case studies show little indication of patronage systems.

A second important part of labour market segmentation is the degree of labour mobility. In Chapter I, it was indicated that this concept needs to be differentiated, since it includes upward mobility to better, more stable jobs, horizontal mobility to similar jobs in other production units, and downward mobility (Breman, 1980: 19). The evidence from the case studies suggests that mobility may be unwanted when it is horizontal or downward, and that the degree of job security is a goal which women workers find of paramount importance (I will return to this in the next section).

In large-scale production, upward labour mobility within the lifetime of individual workers is rare, either within or among production units. Horizontal mobility occurs among women workers in the shrimp industry, due to the relatively seasonal type of production, but not in the other

industries. Downward mobility can be said to occur for women over generations, when daughters of women workers cannot gain access to the types of jobs their mothers had. This appears to be more the case in India than in Mexico.

In small-scale production, horizontal mobility among production units is more extensive for men than for women workers; however, women too often change the unit in which they work. The access to new jobs in small-scale production is relatively open; this implies that women workers need not accept any and all conditions they encounter. Often in conflict situations it is easier for women to look for work elsewhere than to fight the employer. In this type of production, women experiecne horizontal mobility as a necessity as well as an opportunity for improvement of their work situation.

In artisanal production (both household and domestic outwork) workers try to get work from several suppliers at the same time or more frequently from one supplier to another (horizontal mobility). Such irregularity in the supply of work is seen as very threatening. In household production, there is almost no upward mobility (in the Indian textile sector), other than through the family as a whole quitting its production and looking for employment in other sectors. It is difficult to judge the extent to which this happens; evidence from a study by Kasturi (1979) suggests that it may be extensive.

In conclusion, the case studies suggest that the concept of labour market segmentation - encompassing factors related to women's personal and household background, as well as factors related to forms of production and class formation - is useful in explaining systematic differences in the recruitment of men's and women's labour. Factors influence women workers' access to employment in various forms of production, in the following ways: 1) women's marital status and their 'generation' within the household unit influence their access to jobs; young married women in particular are limited to domestic outwork. Young, unmarried women find the different types of production units more open to them than do other groups of women;

2) educational level is used to limit job access in large-scale production, despite being unrelated to job requirements;

3) having children, particularly young children, presents women with problems, but does not seem to limit their access to large-scale production more than to other types of production units. The higher income from large-scale production jobs and its contribution to family welfare outweighs the woman's responsibility for being 'at home' - a job which can be undertaken by others as well;

4) membership in a particular community plays a role in India, and restricts job access to women who belong to particular communities; as other women are excluded, the relative access of these women is in principle increased. Other factors, may, however, interfere;

5) women have access to a smaller range of brokers than men for jobs in large-scale production; fairly wide access in small-scale production, on the basis of personal relationships with employers; and are 'conscripted' into household production on the basis of family relations;

6) job security is a more important value than mobility, and for women workers is greatest in large-scale production. This is coupled to low horizontal and vertical mobility. In small-scale production, lesser job security is coupled to a relatively large horizontal mobility, which is judged fairly positively. Artisanal production manifests the lowest degree of job security, which is coupled to unwanted horizontal mobility.

## 7.3. Women in the labour process

In this section, the way women's participation in the labour process changes during industrialization is considered for the various types of production units. The concept most often used to describe changes in women's employment in Third World countries is that of marginalization. However, this concept cannot be used as it stnds, because it has encompassed several different meanings. These include 1) exclusion from productive employment, 2) concentration outside large-scale production jobs, and 3) substitution or segregation (cf. MacEwen Scott, 1986).

The concept needs to be related more directly to the discussion of the labour process (defined by Schmitz as the combination of material instruments of production, and the social organization of labour (1985: 33)), at the level of the workplace, where the effects of different technologies and labour organization can be measured directly. A short digression into the ideas concerning the effects of technology on the use of labour has been necessary to elicit the elements needed for a more precise conceptualization of women's participation in the labour process. Basically, researchers assume two positions: either positive effects, in terms of efficiency and increase in production and wealth, or negative effects, i.e. the increased subordination of the worker to the machine and deskilling and lower wages. This discussion started in the nineteenth century among economists, and has been taken up more recently primarily by labour sociologists and those in management studies.

Such models have emerged primarily from studies in industrialized countries. Two points relevant to this study have been elicited from the literature: first, variations in the use of technology between industries and different labour processes need to be kept in mind, as mechanization and automation have not occurred everywhere to the same degree. In industries not based on craft work, changes in work have occurred in the direction of casualization of work rather than deskilling (Littler, 1982: 122-145). Secondly, the role of trade unions and workers in resisting increased control over their work has been relatively neglected.

For Third World countries, there is a dearth of studies on technology and labour utilization, both for employment in general and for women's employment specifically. Generally, large-scale production is assumed to use capital-intensive, mechanized technology, although this is influenced by the size of the market for the product, technical specifications and quality standards. In small-scale production, little is known about the actual use of technology, although it is assumed to be intermediate between large-scale and artisanal production. The latter is assumed to be based on hand tool technology and craft skills.

Regarding the concept of marginalization of women's labour at the level of the workplace, a series of more precise questions has been formulated. Women's labour is considered from two perspectives: a current cross-section, describing participation in different forms of production; and changes over time, particularly in large-scale production (1).
(The term marginalization has been restricted here to a specific situation, in which women are relegated to fewer and less-paying jobs than previously.) The aspects included in the former description are: division of functions, skills and acquiring skills, workloads and wages, job security, and mobilization. Looking at change over time, trends described include: substitution effects (i.e. segregation and marginalization

at the level of functions), changes in skills (both deskilling and acquisition of new skills), and changes in categories of labour used (i.e. casualization).

The case studies indicate clear variations in the use of technology in the different forms of production. In large-scale production, the production process is split up into many operations, of which the majority are considered unskilled, and only a few are recognized as skilled. Women have access to only a limited number of skilled functions; they are mainly confined to unskilled functions.

In small-scale production, only several major parts of a production process are divided into functions. This implies that the nature of the work is more varied and requires more and more varied skills. The evidence on women's access to different functions in small-scale production is mixed. In the Indian textile industry (powerlooms) women have access to all functions in small-scale production, and their participation in the different functions is also extensive. In the Mexican shoe industry, gender differentiation by function is quite high as is the degree of segregation by function. A possible explanation for these differences lies in the tightness of the labour market from which these units draw their workers. In India, the market is tight for this particular industry, but in Mexico this is not the case.

In household production, the division of functions between men and women is usually stringent and is sanctioned by local or (in India) jati customs. Women carry out functions seen as secondary, whereas men perform the acknowledged 'main' functions in the labour process. In domestic outwork, women are dominant in carrying out functions subcontracted by firms. However, in the Mexican shoe industry, domestic outwork which is considered highly skilled, is also carried out by men (often in combination with other forms of wage work). This is a highly specific situation, as women's work is seldom considered skilled.

The question of skills has been considered in various ways: as the actual training needed to perform a particular operation, and as the social definition of a function as 'skilled', either by employers or by trade union negotiation. Both aspects usually influence the extent to which women's skills are acknowledged. In large-scale production, workers have function-specific skills; in small-scale industry, less so, and in household production most are multi-skilled (craftsmen and women).

In large-scale production, it is worth remarking that general educational qualifications are required for all jobs, although they are not specifically needed to carry out the operations. Rather, qualifications are used as a means to restrict access to groups of workers presumed more capable (this is related to the idea that school education has taught workers the discipline necessary for factory work). In addition, age and
marital status, which have nothing to do with the job itself, are used as criteria. On the job training is short and operation-specific. Women mainly have access to unskilled functions, excepting specific groups of women (such as the Kerala women graders).

Small-scale and household production are important loci of extensive skill training. This occurs on the job, in apprenticeships or as unpaid family labour. There are clear gender differences, however, in the manner and functions in which boys and girls receive training. For boys, apprenticeships are the usual way of receiving an all-round artisanal

training. Girls are taught specific functions only, predominantly as unpaid family members. These types of production are also the locus of the skilled male owner/producer, who shifts from work in large-scale production to small-scale or household production. Despite the fact that their functions are indispensable, girls and women are often considered secondary to the production process and as doing unskilled work. Nevertheless, in growing small-scale industries women have relatively greater access to skilled functions.

In domestic outwork, the women workers must already have gained their skills before obtaining access to this type of work. Although it is considered unskilled by most employers, it is built on training received within the household, either in household production or as part of training for domestic labour.

Workloads and wages in large-scale production tend to consist of fixed workloads for which a basic wage is paid (although fixing the level is a political process). Piece-rates are paid for amounts of work which go beyond the fixed workload. Fringe benefits and social security are added for all long-term wage workers in large-scale production, and form an important component of the total wages. Women in large-scale production usually work eight hours, in early and late shifts. They are not allowed to work night shifts.

Women's workloads in this type of production are not always readily comparable to those of men, because of differences in the functions carried out and segregation by function. It is characteristic for women to work hours equally as long as men, but to more often have lower wage rates, and less often 'monthly' determined and fixed wages. This implies that even where women work as long-term wage workers, their wage position is less favorable than that of most male long-term workers.

In small-scale industry, workloads may be fixed daily, or piece-rates may be paid per unit of work carried out. Working hours vary from eight to twelve hours per day. Both men and women work night shifts. There is greater irregularity in the amount of work provided, which makes workloads more variable than in large-scale production. Although women work hours and shifts similar to men workers, they earn lower wages on the basis of segregation by function. When this does not occur, their wage levels more closely resemble those of men workers. Only a few wage workers receive fringe benefits in addition to piece-rates. Who receives such benefits appears to be related to the extent to which the employer wishes to bind particular workers to the unit. In India, fewer women workers have such fringe benefits than men. For Mexico, the evidence is not clear.

In artisanal production, the number of hours worked daily vary from four to fourteen. In household production, men and women's working hours are synchronized, and depend on the amount of work available. Irregularity in work supply is coupled with low piece-rates for the finished product, paid to the male head of household. The use of unpaid family labour is extensive, and there are clear gender differences: wives and daughters have no right to payment for their work, older sons receive 'pocket money'.

In domestic outwork, working hours also vary with the supply of work. This implies long hours of overtime in busy seasons, and unemployment in slack seasons. Women predominate in this type of production, and are paid very low piece-rate wages per unit of work completed. Deductions from wages for unaccepted goods are common.

Job security (the opposite side of labour turnover) is an important criterion by which workers judge the quality of their job. The extent to which all workers would prefer to increase their job security, even if it would mean lower unit-level wages is striking. This implies that regularity of income is relatively more important than its amount. That men also consider this an important goal emerges from further evidence on the Indian urban labour market (Holmström, 1984: 196-198).

The highest relative degree of job security among women workers is found in large-scale production. A degree of uncertainty always remains: in the Mexican situation, workers may be fired when they become older; in the Indian situation, the degree of insecurity is defined by the restricted possibilities for daughters (or sons) to take over the jobs of their parents (5). Even in this case, workers often are concerned with increasing existing job security. Women workers are often more concerned with this aspect than men. Still, these are low levels of insecurity compared to women working in small-scale or artisanal production.

In small-scale production, job security is defined less in terms of a contract, supported by labour legislation than in large-scale production. Security is built more on a good personal relationship with the employer. However, in this type of production unit the general concern of workers with this issue seems to be less than that of workers in large-scale production. It seems to be a positive lack of concern, related to the relatively easy horizontal mobility of women workers in this type of production unit, such that work often available. Again, this situation appears to be linked to the growth in this type of production, and could in my opinion change, when growth decreases.

In domestic outwork, women have very little job security. Competition for work is fierce, and they try to limit this by working for several subcontractors simultaneously. In the case of households, usually the men in the household take over this function; in the case of domestic outworkers, women themselves search for more work.

In the industries studied, trade unions operate only in large-scale production units. Women workers in those units are generally members of a union, but it has little relevance for them. They receive very little help from union officials. In the textile industry, women have often supported trade unions on the issues raised. However, unions have used gender issues as bargaining chips with employers. Women workers also organize by department, and conflict with male workers from other departments is possible. This implies that specific gender issues are acknowledged by women workers and trade unions, but that support for women workers is lacking. Interests of women and men workers conflict, due to their different employment and household positions.

There is evidence that it is possible to organize women working in small-scale production and domestic outwork. Two well-known examples in India are the Self-Employed Women's Association (SEWA), and the Working Women's Forum (WWF). Reports on these organizations indicate, however, that women working as dependent producers and those working as disguised wage workers need different means of help. For dependent producers, credit is a primary need, and income levels can be improved substantially by extending it. For disguised wage workers, dependence on raw material suppliers is overwhelming, for financing as well as materials; for these women, a more trade union-like organization and alternative sources of finance are necessary. However, a more systematic analysis needs to be made of worker needs and the types of organization best able to meet these needs.

Changes over time in the positions occupied by working women must be considered in relation to changes in the use of technology and the social organization of labour by employers. Within a given type of production unit the substitution of women by men workers may occur by way of segregation between men and women by function, de- and re-skilling of functions and the marginalization of women to fewer and less-paid functions. Between different types of production units, substitution occurs by way of an increase of indirect forms of control and differential use of labour (i.e. casualization). Changes are most clearly visible within large-scale production and from large-scale to small-scale and artisanal production; within small-scale and artisanal production units it is very difficult to trace them.

The segregation of women workers by function in large-scale production has always been fairly high, and it appears to be increasing somewhat. Changes in skill levels have occurred. In the textile industry, functions have been combined, increasing the variety in the work. Where such functions were previously held by women, they are being taken over by men. In the shoe industry, functions have been increasingly split up, and the resulting simpler operations are more often carried out by women. This implies that over time women's access to functions with a greater variety of skills, and functions which are better-paying has decreased. Instead, there is more gender specificity in recruitment for simpler, unskilled functions. In the textile industry, where functions have become more complex, women's marginalization has increased; the number of highly paid functions to which women have access has decreased. In the shoe industry, where functions have become simpler and operations more split up, women have gained access more and better-paying functions than previously.

As noted before, in a growing small-scale form of production (powerlooms) the segregation by functions of women workers and their marginalization are quite low. There is also no evidence that this might be on the increase. In a small-scale sector which is not growing so quickly (shoes), the segregation by functions is high; evidence for increases, however, is lacking. Marginalization of women workers cannot be traced here.

In household production, segregation has always existed; women's access to men's functions occurs only when there is no one else to carry out the work. As this usually implies overburdening women (e.g. widows) because they cannot recruit other labour, it cannot be seen as a positive aspect.

Casualization of work is related to changes in the social organization of labour in large-scale production: particularly the extent to which a firm subcontracts production to small-scale production units. The evidence indicates that this process is determined first by the technical possibilities for doing so, but no less importantly by the possibilities of the parent firm saving on labour costs, avoiding trade union activities, and averting risk in production fluctuations.

The evidence for casualization of women's work is less clear from the workers' side than from the firm side. This is due, first, to increased subcontracting which may influence women's work opportunities over generations, i.e. new generations of women may have access only to work that is less secure than that of their mothers. Second, new groups of women workers may carry out more casual forms of work. Therefore, it is likely that the individual woman worker may not be the best unit of analysis for examining casualization. Instead, changes in the

occupational structure should be considered for women as a group. That, however, falls outside the scope of this study.

The following table recapitulates the aspects of women's participation in the labour process discussed, and the changes in such participation.

Figure 7.2. Women workers and the labour process

| CURRENT SITUATION | large-scale | small-scale | artisanal: household | artisanal: domestic outwork |
|---|---|---|---|---|
| division of functions | - women mainly in unskilled functions | - mixed evidence: access to all vs only unskilled f. | - strict division /flexible when nec. | - women in unskilled functions dominate workforce |
| skills | - women's functions classified as unskilled | - access to skilled functions in growth phase | - M/W skilled artisans; women not acknowledged as such | - women in 'unskilled' f., which still need experience |
| workloads/ wages | - similar workloads, lower wages than men | - similar wl., lower unit wages, less fringe benef. | - similar wl. unpaid family labour | - long hours very low unit wages |
| job security | - high, comparable to men | - low, less than men<br>- rel. employer important | - high, based on family relations | - lowest/not comparable with men |
| mobilization | - high, on paper/shop-floor action by women not supported by men | - none | - not relevant | - not relevant |

CHANGES OVER TIME

| | large-scale | small-scale | artisanal | |
|---|---|---|---|---|
| | | | household | dom.outwork |
| Substitution | | | | |
| A: segregation | - increasing | - steady | - steady | - steady |
| B: marginalization (by function) | - a) when functions become more varied, women marginalized to fewer, less-paid functions | no | no | no |
| | b) when functions become simpler, % women increased | | | |
| Skill changes | | | | |
| A: deskilling | - when functions are more varied, women lose access to existing skills | | | |
| B: new skills | - when functions are deskilled, women gain access to new skills, more than before | | | |
| Casualization | - increasing as subcontracting increases (see text for reasons) | - not evident | - not evident | |

## 7.4. Women, the household and autonomy

This fourth section concerns the relationship between different types of productive work and women's position within the household. The family-based household has been defined as the unit within which reproduction is organized, and in which the 'relations between members are often thought of in kin relations' (Harris, 1981: 51-52). The household can be seen as a set of exchange relationships, regarding a) the division of productive work and domestic labour among its members, b) bringing in income, exchanges and consumption among family members, and c) decision-making patterns which indicate each person's relative autonomy.

The literature on households seen from the perspective of unequal relations between household members is not yet extensive. However, the following distinctions have been made which can be useful in distinguishing reasons for variations in the pattern of women's position aside from reasons related to her productive work and income.

A primary distinction which has been made among households is between female-headed and male-headed households; clear differences in the exchange relationships in these two types of households have been documented in Mexico (Chant, 1986), which indicate that the division of labour and income is less burdensome for women in female-headed housholds, and their autonomy over use of income greater (with positive benefits for children as well).

The division of productive and domestic labour also needs to be considered over time, in relation to the family life cycle, for a proper understanding of variations. Expansion, consolidation, and dispersion phases can be seen. A further distinction within the household between girls and women of different generations is also necessary.

Systems of income pooling indicate that women may receive most of the husband's income, a fixed allowance, or a share of the husband's income. The last two systems present women with problems in coping with price increases.

In allocation of consumption between household members, there is some evidence that the lower the pooled income of the household, the more important the role played by sex/gender systems in the division of food, health care, and education.

The criterion used to compare women's autonomy is her participation in household decision-making patterns. The limitations of this criterion are that a) only explicitly taken decisions can be traced, so that self-imposed decisions are left out, and b) the evidence requires extensive interpretation by the researcher/interviewer (White, 1984: 27-28).

The relationship between productive work and women's position in the household needs to be looked at in two analytically distinguishable ways. First, women's employment opportunities are structured by the household and by their personal characteristics. This includes the following aspects: household composition, religious precepts concerning women, and women's educational levels and marital status. Secondly, a woman's employment
influences her bargaining power within the household. This is reflected in the following aspects: the division of productive and domestic labour among family members, the pooling and consumption of income, and decision-making patterns (i.e. the extent of women's autonomy).

The evidence presented here is based mainly on the results of the case study carried out by the author in the south Indian textile industry; other studies did not prove comparable. Therefore, the conclusions drawn here must be considered prêliminary ones, which need further systematic study.

The influence of household and personal characteristics on women's access to employment in different forms of production has been discussed in section 7.2. Here I will consider these factors briefly in order to discover to what extent such factors influence women's initial bargaining power within the household.

In the Indian context, variations in household composition are usually looked at from the perspective of nuclear or extended households. In the case of the Coimbatore textile industry, extended households were found to be significantly more frequent among women in large-scale production than in either small-scale or household production. The percentage of widows was low - under 10% - but similar among workers in all forms of production.

For the Mexican shoe industry, some information on household composition is available. The division into nuclear or extended family is less relevant in this context; instead marital status is important. In large-scale production, some twenty percent of the women were single mothers, while in other forms of production this figure was around 10%. The percentage of widows was low in all types of production units, varying from 2 to 6% of all women workers. This does not confirm the general idea that women work in small-scale and artisanal forms of production in order to combine their child care and domestic work with economic activities.

In the Indian case, the influence of caste background has a measurable impact on differences in women's bargaining power within the household. Castes which acknowledge the possible economic contributions of women are the castes in which women have a greater bargaining power.

The influence of women's personal characteristics on their bargaining power varied. Education had little influence on women's autonomy within the household, while variations in bargaining power related to women's marital status were striking. In south India, married women showed greater bargaining power than unmarried women. This indicates that mothers have more bargaining power than do daughters. Marital status was more important than having children; having children, or even only sons, did not have a measurable impact on women's bargaining power.

Variations in the balance between domestic and productive labour were found to be important. It was clear that the heavier the domestic work burden of the women, the less bargaining power they had within the household. This applies particularly to married women, who are considered to have primary responsibility for carrying out domestic labour. However, a woman who can call on the labour of other (female) family members to assist her in carrying out domestic work has more bargaining power than those who must work alone. Women in small-scale and household production spend relatively less time in domestic labour and longer hours in productive work than do women in large-scale production. However, the total working day tends to be similar for all working women (50% of them spend 11-13 hours per day working). The division between productive and domestic labour presumably varies because those in small-scale and artisanal production earn less per hour, and therefore must spend more hours each day on productive work.

Variations in pooling and consumption of income were examined. The number of working family members is higher in small-scale and household production than in households of women working in large-scale production. Despite this fact, family income is significantly higher for households of women working in large-scale production than in small-scale and artisanal production, where family incomes become progressively lower. Pooling of income is more common among the families of women working in large-scale production, although it is not clear whether total incomes are pooled. However, it is clear that in small-scale production, the young unmarried women contributed almost their entire income to the parents. In household production, women did not earn money with their work, so that family income was determined by the male head of household. There was no observable impact on women's autonomy, due to the level of household income.

Consumption of income varied quite strongly among women working in different types of production units. The main criterion used was food expenditure. In families where women worked in large-scale production, food expenditures generally took up a lower percentage of total family income than in families with women in small-scale production, although this was still a major expense. For families in household production, food was the major expense item, and almost a quarter of the families spent 80-100% of income on food. The quality of the food also differed; the families of women in large-scale production would eat meat several times per month, in families in household production this occurred very seldom. However, the information on this aspect was too general to allow a useful comparison with the degree of women's autonomy.

The extent to which a woman's bargaining power is increased by the characteristics of the productive work she carries out was the second set of factors considered.

A first major difference was found between women who work in various forms of wage labour and those who work as unpaid family members. Women working for wages manifest decidedly greater bargaining power than those whose work is not acknowledged by money.

A second major difference relates to the degree of differentiation between men and women workers in the workplace. In small-scale production in the textile industry, women have access to all types of functions, and show a low degree of segregation from men by function. In large-scale production, women have access to only a few functions and the degree of segregation is high. Taking into account the influence of women's marital status, it was found that women's bargaining power in the household was positively related to a less rigid gender division of labour in their productive work.

A third aspect is related to differences in the wage levels of men and women workers. Comparing women's wages to average levels of wages within production units show that there is a positive correlation between improvements in women's bargaining power and higher wage levels.

The discussion above indicates that factors related to position within the household in themselves influence the extent of women's bargaining power there, in particular, marital status, caste background, and the extent of domestic labour which a woman must carry out. The bargaining power of a women is also influenced by the characteristics of the productive work she carries out; particularly, wage labour versus unpaid family labour, access to a larger number of functions, less segregation between men and women by function, and less difference in wage levels of men and women.

## 7.4. Future directions for research

In this final section, I would like to suggest several potential areas of research which have emerged from this study as a whole.

The evidence from the case studies indicates that there are systematic differences among the different forms of production examined, in terms both of external relationships and those internal to the unit. Small-scale production is extensive in the agro-industries studied and I expect it will continue to expand. The evidence for artisanal production suggests that household production (in the textile industry) may decrease, whereas forms of domestic outwork quite probably will expand.

The relations between small-scale and large-scale production firms lie in their subcontracting relationships and their forward and backward linkages. It is striking that relations with trading capital (which supply raw materials and sell finished products) are at least as important for small-scale and artisanal producers as are relations with large-scale industrial capital. This aspect has been relatively neglected in models of petty commodity production, and should be further studied to determine its impact on earnings and investment opportunities for these groups of producers.

Further, it emerges that subcontracting occurs not only between large-scale and small-scale production units, but also between small-scale and artisanal production - mainly in the form of domestic outwork. In the industries studied such subcontracting has existed for some time, and does not seem to form a chain leading back to large-scale production units. This suggests that models of subcontracting relationships are much more varied and extensive than usually thought. The variety and impact of these links needs to traced further.

In a nutshell, the discussion above suggests that relationships among the different types of units are heterogeneous, and that future models need to take into account the role of trading capital in determining dependency of small-scale and artisanal production units, in addition to the importance of industrial capital.

The categories of casual work formulated by Gerry and Bromley were found useful. The neglect of the extensive use of unpaid family labour (first indicated by Tom) leads to important underestimations of women's contribution to economic activities. It would be worthwhile to trace the extent to which this type of labour occurs is used in other industries and services.

The use of such various forms of casual labour occurs within each type of production unit more often than classical models of production units would have us believe, extending even to large-scale production units. Therefore, caution is needed in predicting the impact of changes within production units on 'employment'; impact needs to be specified for each category of worker. This allows the 'invisible' contribution of women workers in the various forms of casual labour to be recognized, so that their interests could possibly be better defended.

Women's access to employment is clearly linked to factors related to their household circumstances as well as to the type of production unit. The extent to which long-term wage work outweighs the disadvantages of inflexible working hours for a large group of women with children is striking; only very young married women are found extensively in domestic

outwork. This is rather different from the model on gender division of labour usually posited (Heyzer, 1981) and needs to be investigated further.

The concept of marginalization previously used to analyze changes in women's participation in productive employment has been replaced by a model which incorporates a number of specific characteristics of women's work at the level of the workplace, and relates them to changes in the use of technology and organization of work. This approach makes it more possible to trace the directions of and the reasons behind transformations in women's productive work, and to discover more effective strategies to counter negative developments.

The extent to which a woman's productive work and income increases the extent of her autonomy (bargaining power) within the household is still a relatively underdeveloped area of empirical research. Although the evidence from this study is of necessity limited, it is clear that aspects of both the existing household situation as well as the employment situation are factors which influence women's bargaining power. In this area of research, the methodological problems are also still largely unsolved. Both further development of a model which incorporates the various relevant aspects, and solution of existing methodological difficulties are important areas for future research.

Footnotes to Chapter 7.

(1) Lack of information both at the theoretical and case study level prevent me from discussing this issue for other forms of production.

(2) It would be interesting to examine for other industries to what extent seasonality in raw materials could be a significant distinguishing feature among agro-industries.

(3) For the shrimp industry, figures were not disaggregated by type of production unit for this aspect.

(4) Alternative explanations, such as differences in educational level, do not apply insofar as these case studies are concerned.

(5) This does not apply to the small percentage of casual workers in this type of production unit.

APPENDIX A.

Table A.1. Distribution of textile production units and women employed by type of production organization and region

| | mills 1) | powerloom | handloom 6) |
|---|---|---|---|
| production units | | | |
| Bombay (composite) | 53 | 118,834 | 77,000 5) |
| rest of Maharashtra (comp.) | 25 | | 185,000 2) |
| Ahmedabad | 62 | 58,532 3) | 36,000 2) |
| rest of Gujarat (comp.) | 27 | | |
| Coimbatore district (sp.) | 177 | 25,266 3) | |
| Madras (spinning) | 89 | 100,000 4) | 556,000 2) |
| nationally (sp.) | 639 | | |
| (comp.) | 281 | 800,000 7) | 3,020,000 7) |
| employment of women (% to total employment) | | | |
| Bombay | 4% | | 50% (general estimate) |
| Ahmedabad | 4% | | 50% |
| Coimbatore | 14% | | 50% |
| Madras | 5% | | 50% |

Note. The national figures are for 1984, whereas the regional figures apply to the late seventies. In the early eighties, large numbers of existing powerlooms came under the national regulations, which has strongly influenced the figures.

Sources: 1) ICMF, Handbook of Statistics on Cotton Textile Industry, 1986.
2) Estimates Committee, 1978.
3) Estimates Committee, 1978 - II. These figures are very unreliable due to the large number of unregistered powerlooms.
4) Textile Commissioner, Madras - verbal communication.
5) Center for Studies in Decentralized Industries, 1980
6) Handloom figures apply to the whole state, with the exception of the first figure mentioned.
7) ICMF, Report for the year 1984-85. Figures are for 1984.

Table A.2. Growth of cotton and non-cotton cloth in the mill sector (million meters)

| | cotton cloth | | 100% man-made | | blended | | total | |
|---|---|---|---|---|---|---|---|---|
| | abs. | growth | abs. | growth | abs. | growth | abs. | growth |
| 1951 | 3727 | 5 x | | | | | 3727 | 5 x |
| 1956 | 4852 | -1 x | | | | | 4852 | -1 x |
| 1961 | 4701 | -2 x | | | | | 4701 | -2 x |
| 1966 | 4239 | -1 x | | | | | 4239 | -1 x |
| 1971 | 3957 | | 2 | | 148 | | 4107 | |
| 1972 | 4245 | 7 | 1 | -50 | 98 | -34 | 4344 | 6 |
| 1973 | 4169 | -2 | 1 | 0 | 129 | 32 | 4299 | -1 |
| 1974 | 4316 | 4 | neg. | | 124 | -4 | 4440 | 3 |
| 1975 | 4032 | -7 | 1 | 0 | 234 | 89 | 4267 | -4 |
| 1976 | 3881 | -4 | 1 | 0 | 344 | 47 | 4226 | -1 |
| 1977 | 3224 | -17 | 7 | 600 | 891 | 159 | 4122 | -2 |
| 1978 | 3251 | 1 | 12 | 71 | 983 | 10 | 4246 | 3 |
| 1979 | 3206 | -1 | 6 | -50 | 942 | -4 | 4154 | -2 |
| 1980 | 3476 | 8 | 4 | -33 | 696 | -26 | 4176 | 1 |
| 1981 | 3189 | -8 | 7 | 75 | 919 | 32 | 4073 | -2 |
| 1982 | 2347 | -26 | 8 | 14 | 680 | -26 | 3035 | -25 |
| 1983 | 2704 | 15 | 5 | -38 | 819 | 20 | 3528 | 16 |
| 1984 | 2573 | -5 | 7 | 40 | 785 | -4 | 3365 | -5 |

Notes.

1. These growth percentages are average yearly figures computed over a five-year period.
2. The figures of 1982 are strongly influenced by the Bombay textile strike, and must therefore not be considered representative within the trend.

Source: ICMF, Handbook of Statistics on the Cotton Textile Industry, 1980; 1986; ICMF, Report for the Year 1980-81, 1981.

Table A.3. Production of cloth in the 'unorganized sector' (in million ms.)

| | cotton cloth | | 100% man-made | | blended | | total | |
|---|---|---|---|---|---|---|---|---|
| | abs. | growth | abs. | growth | abs. | growth | abs. | growth |
| 1951 | 1013 | 10x | | | | | 1013 | 10x |
| 1956 | 1663 | 7x | | | | | 1663 | 7x |
| 1961 | 2372 | 5x | | | | | 2372 | 5x |
| 1966 | 3097 | 2x | | | | | 3097 | 2x |
| 1971 | 3399 | | 971 | | 100 | | 4470 | |
| 1972 | 3777 | 11 | 918 | -5 | 101 | 1 | 4796 | 7 |
| 1973 | 3602 | -5 | 886 | -3 | 121 | 20 | 4609 | -4 |
| 1974 | 3968 | 10 | 849 | -4 | 87 | -28 | 4904 | 6 |
| 1975 | 4002 | 1 | 845 | 0 | 133 | 53 | 4980 | 2 |
| 1976 | 4064 | 2 | 1008 | 19 | 253 | 90 | 5325 | 7 |
| 1977 | 3678 | -9 | 1203 | 19 | 567 | 124 | 5448 | 2 |
| 1978 | 4074 | 11 | 1463 | 22 | 765 | 35 | 6302 | 16 |
| 1979 | 4334 | 6 | 1308 | -11 | 731 | -4 | 6373 | 1 |
| 1980 | 4838 | 12 | 1324 | 1 | 535 | -27 | 6697 | 5 |
| 1981 | 4973 | 3 | 1458 | 10 | 641 | 20 | 7072 | 6 |
| 1982 | 5490 | 10 | 1404 | -3 | 585 | -9 | 7479 | 6 |
| 1983 | 5911 | 8 | 1582 | 13 | 513 | -12 | 8006 | 7 |
| 1984 | 5930 | 0 | 2176 | 38 | 1165 | 127 | 9271 | 16 |

Note. The growth rates marked x are average yearly figures computed over a five-year period.

Sources: ICMF, Handbook of Statistics on the Cotton Textile Industry, 1980; ICMF, Report for the Year 1980-81, 1981.

Table A.4. Profitability ratios in the textile industry (gross profits as % of sales)

| | 1965 | 1970 | 1975 | 1980 |
|---|---|---|---|---|
| textile Coimbatore | 8.0 | 11.4 | | |
| textile national | 4.4 | 6.1 | 2.7 | 7.8 |
| other industries | 9.8 | 10.3 | 9.1 | 9.6 |

Sources: Indian Textile Bulletin, Annual Number 1979 .
SITRA, Financial Performance, an Interfirm Comparison, 1968, 1976.
ICMF, Handbook of Statistics on Cotton Textile Industry, 1986.

APPENDIX B.1.

Clusters within index of social autonomy

| I | II |
|---|---|
| decisions on: | decisions on: |
| own job | son's bride |
| union membership | daughter's groom |
| own schooling | dowry |
| son's schooling | son's job |
| daughter's schooling | daughter's job |
| control of family income | |
| family planning | |

APPENDIX B.2.

1. Small sample of women

| | SECT | FT | AGE | MS | ED | WORK | LOCAT | CHILD | L's INC | FUNCT | W MEMB | DEPEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SECT | - | -.17 | -.26 | -.34 | .12 | -.87 | 1.0 | 2.6 | -.83 | .39 | .46 | -.29 |
| FT | | - | .18 | .63 | -.14 | .21 | -.22 | -.27 | .27 | -.40 | -.23 | .28 |
| AGE | | | - | .76 | -.63 | -.16 | -.23 | .45 | .18 | -.43 | .00 | -.09 |
| MS | | | | - | -.60 | -.26 | -.43 | .31 | .13 | -.27 | -.42 | .08 |
| ED | | | | | - | -.05 | .46 | -.27 | -.07 | .27 | -.02 | .07 |
| WORK | | | | | | - | -1.0 | -.41 | .95 | -.20 | -.30 | .17 |
| LOCAT | | | | | | | - | -.04 | -.87 | .69 | .43 | -.14 |
| CHILD | | | | | | | | - | -.08 | .00 | .23 | .21 |
| L's INC | | | | | | | | | - | -.38 | -.32 | -.17 |
| FUNCT | | | | | | | | | | - | .18 | -.04 |
| W MEMB | | | | | | | | | | | - | -.18 |
| DEPEND | | | | | | | | | | | | - |

2. Large sample of women

| | SECT | FT | AGE | MS | ED | WORK | LOCAT | CHILD | L's INC | FUNCT | W MEMB | DEPEND |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| SECT | - | -.75 | -.45 | -.35 | -.10 | -.93 | .82 | -.38 | -.93 | .52 | .32 | -.40 |
| FT | | - | .37 | .46 | -.01 | .65 | -.58 | .20 | .58 | -.59 | -.13 | .28 |
| AGE | | | - | .91 | -.51 | .17 | -.23 | .56 | .29 | -.49 | -.11 | .14 |
| MS | | | | - | -.54 | .01 | -.11 | .69 | .20 | -.45 | -.50 | .08 |
| ED | | | | | - | .19 | | -.34 | .07 | .16 | -.02 | -.05 |
| WORK | | | | | | - | -.77 | .06 | .88 | -.43 | -.20 | .37 |
| LOCAT | | | | | | | - | -.10 | -.69 | .30 | .35 | -.25 |
| CHILD | | | | | | | | - | .21 | -.45 | -.02 | .32 |
| L's INC | | | | | | | | | - | -.40 | -.23 | .32 |
| FUNCT | | | | | | | | | | - | .21 | -.31 |
| W MEMB | | | | | | | | | | | - | -.17 |
| DEPEND | | | | | | | | | | | | - |

Explanation of symbols:

SECT = sector
FT = family type
AGE = age
MS = marital status
ED = education of respondent
WORK = respondent's work
LOCAT = location of family
CHILD = number of children
L's INC = repondent's income
FUNCT = repondent's function
W MEMB = number of working family members
DEPEND = number of dependents

Appendix C. Basic wages by functions; average and variations in the Coimbatore mill sector.

| Functions | average | minimum | % under average | maximum | % above-average |
|---|---|---|---|---|---|
| A. godown + mixing attendent | 91.26 | 63.12 | - 31 | 160 | + 75 |
| B. bale breaker | 81.80 | 58.50 | - 28 | 120.12 | + 47 |
| finisher scut attendant | 91.42 | 62.14 | - 32 | 129.52 | + 42 |
| C. card room fitter | 91.43 | 63.64 | - 30 | 162.62 | + 78 |
| can tenter | 85.07 | 64.94 | - 24 | 125.06 | + 47 |
| fitter | 96.37 | 72.54 | - 25 | 158.34 | + 64 |
| D. complex tenter | 111.81 | 75.00 | - 33 | 137.54 | + 23 |
| E. doffing boy | 87.63 | 55.04 | - 37 | 150.28 | + 72 |
| drawing tenter | 99.98 | 63.44 | - 37 | 162.62 | + 63 |
| simplex tenter | 111.56 | 67.06 | - 40 | 184.86 | + 66 |
| bobbier carrier | 75.88 | 55.64 | - 27 | 115.18 | + 52 |
| F. doffing boy | 87.49 | 55.64 | - 36 | 150.28 | + 72 |
| spinner | 134.59 | 92.04 | - 32 | 199.16 | + 48 |
| reserve piecer | 134.50 | 92.04 | - 32 | 199.16 | + 48 |
| cleaning gang | 86.48 | 70.20 | - 19 | 130.26 | + 51 |
| doff carrier | 86.89 | 55.54 | - 36 | 150.28 | + 73 |
| G. reeler | 88.27 | 53.82 | - 39 | 165.10 | + 87 |
| sweeper | 77.10 | 53.04 | - 31 | 146.64 | + 90 |
| H. baler | 80.53 | 55.64 | - 30 | 144 04 | + 79 |
| I. winder | 119.83 | 86.90 | - 23 | 190.02 | + 59 |
| J. doubler | 108.39 | 55.04 | - 49 | 165.02 | + 52 |

Source: current workload agreements from sample mills.

APPENDIX D.

FAMILY AND PERSONAL CHARACTERISTICS OF THE WOMEN (in %)

| | Mill | Powerloom | Handloom |
|---|---|---|---|
| Caste | | | |
| Naidu | 47 | 7 | - |
| Gounder | 13 | 10 | - |
| Chettiar | 23 | 40 | 87 |
| Mudaliar | - | 23 | 7 |
| Others | 17 | 17 | 3 |
| N.A. | - | 3 | 3 |
| Marital status | | | |
| Unmarried | 3 | 33 | 27 |
| Married | 90 | 63 | 67 |
| Widow | 7 | 3 | 7 |
| Family type | | | |
| Nuclear | 63 | 87 | 73 |
| Joint | 37 | 13 | 27 |
| Education | | | |
| Illiterate | 47 | 20 | 40 |
| Primary | 47 | 43 | 43 |
| Secondary | 7 | 37 | 17 |
| Age | | | |
| 16-25 | 7 | 47 | 30 |
| 26-35 | 13 | 27 | 17 |
| 36-45 | 33 | 20 | 10 |
| 46-55 | 27 | 3 | 37 |
| 56-65 | 20 | - | 3 |
| N.A. | - | 3 | 3 |
| Number of children | | | |
| 1-2 | 33 | 20 | 20 |
| 3-4 | 37 | 23 | 40 |
| 5-6 | 20 | 10 | 7 |
| >6 | - | - | 3 |
| Total number of working family members | | | |
| 1-2 | 60 | 43 | 20 |
| 3-4 | 37 | 40 | 50 |
| 5-7 | 3 | 17 | 30 |
| Total family income (in Rs./month) | | | |
| 0-500 | 13 | 30 | 40 |
| 501-1000 | 27 | 50 | 37 |
| 1001-1500 | 17 | 13 | 10 |
| 1501-2000 | 27 | - | 10 |
| >2000 | 13 | 3 | - |

| | Mill | Powerloom | Handloom |
|---|---|---|---|
| Family savings | | | |
| yes | 67 | 37 | 30 |
| no | 33 | 63 | 63 |
| Women's contribution to family income | | | |
| 0-20 | 7 | 43 | 70 |
| 21-40 | 23 | 30 | 20 |
| 41-60 | 33 | 17 | 3 |
| 61-80 | 13 | 3 | 3 |
| 81-100 | 7 | 3 | 3 |
| N.A. | 17 | 3 | - |
| Women's total working time (hours/day) | | | |
| 8 | - | 3 | 10 |
| 8-10 | 40 | 20 | 27 |
| 11-13 | 47 | 47 | 40 |
| 14-16 | 13 | 30 | 23 |
| % time spent on household work per day of total working time | | | |
| 0-20 | 7 | 43 | 70 |
| 21-40 | 23 | 30 | 20 |
| 41-60 | 33 | 17 | 3 |
| 61-80 | 13 | 3 | 3 |
| 81-100 | 7 | 3 | 3 |
| N.A. | 17 | 3 | - |
| Years worked by women in last job | | | |
| 0-10 | 10 | 94 | 44 |
| 11-20 | 38 | 3 | 27 |
| 21-30 | 28 | 3 | 13 |
| >30 | 24 | - | 17 |
| Previous jobs held by women | | | |
| yes | 27 | 63 | 33 |
| no | 73 | 37 | 67 |

(N=90, equally divided among sectors)

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Samenvatting

Doel van het onderzoek is te laten zien welke verschillen er bestaan in het gebruik van vrouwenarbeid in groot-, klein-schalig, en artisanale produktiewijzen; ook de veranderingen die optreden in vrouwenarbeid in grote bedrijven naar aanleiding van mechanizering en uitbesteding van onderdelen van produktieprocessen naar de 'informele sektor' worden bekeken. De vraagstelling is toegespitst op enkele arbeidsintensieve industrieen waar veel vrouwen in werken; m.n. textiel, schoenen, en garnalen verwerking. Geografisch beperkt de studie zich tot twee grote NIC's - Mexico en India.

Methode van onderzoek is geweest a) eigen veldwerk in een zuid Indiase industriestad in de textiel industrie, b) vergelijkende case studies in de garnalen industrie in India en in de schoenen industrie in Guadalajara, Mexico. Deze methode is gekozen door a) gebrek aan informatie op nationaal niveau omtrent vrouwenarbeid, m.n. in de 'informele sektor', b) het voordeel van qualitatief goed materiaal uit de verzamelde case studies, en c) de goede onderlinge vergelijkbaarheid van de case studies.

De resultaten geven aan dat er systematische verschillen zijn in de kenmerken van de verschillende typen bedrijven, zowel in hun externe als interne verhoudingen. Dit geldt ook voor de arbeidsverhoudingen in de bedrijven. Opvallend is dat in alle typen bedrijf gebruik gemaakt wordt van vormen van 'losse' arbeid; dit geldt steeds sterker naarmate de schaal van de produktie zich vernauwt. Vrouwen worden in toenemende mate gerecruteerd voor arbeid van groot naar klein-schalig en artisanale bedrijven toe; zij zijn de meerderheid van de mensen die 'thuiswerk' en onbetaalde familiearbeid verrichten.

In het arbeidsproces zijn er duidelijke verschillen tussen de wijze waarop vrouwen en mannen worden opgenomen. Vrouwen hebben toegang tot een kleiner aantal kanalen om werk te krijgen; m.n. vakbonden zijn een voor hen vrijwel gesloten systeem. Wanneer vrouwen funkties bekleden binnen een bedrijf, hebben zij minder toegang tot geschoolde funkties, werken vaak gehetzelfde aantal uren als mannen, en worden minder betaald.

Veranderingen in bedrijven via mechanizering of uitbesteding van produktie aan kleinere bedrijven, zijn van invloed op de omvang van arbeid voor vrouwen in groot-schalige bedrijven, en de mate waarin zij toegang hebben tot meer geschoolde, beter betaalde funkties. Bij mechanizering waarin funkties meer inhoud krijgen, verliezen vrouwen hun toegang tot zulk werk; waar funkties eenvoudiger worden, zijn het vaak juist vrouwen die dergelijke funktieskrijgen toegewezen.
'Casualization' van vaste loonarbeid naar 'thuiswerk' komt veel voor, en betekent voor vrouwen een sterke achteruitgang in hun positie als werkneemster.

De betekenis van reeds bestaande sociale faktoren en die van het produktieve werk dat zij verrichten, voor de positie van vrouwen binnen het huishouden is als laatste bekeken. De resultaten geven aan dat inkomen uit arbeid en een meer gelijke arbeidsverdeling tussen mannen en vrouwen in het bedrijf belangrijke invloeden zijn voor positieverbetering; andere faktoren zoals getrouwd zijn, tot specifieke kasten behoren, and relatief weinig huisehoudelijk werk zijn ook gunstig.

De resultaten van de case studies zijn gebruikt als basis voor een meer systematische beschrijving van de wijze waarop vrouwen in verschillende vormen van produktieve arbeid zijn opgenomen, en welke betekenis deze heeft op hun positie in het huishouden.

STELLINGEN

1. In evaluating the income distribution effects of small-scale production, it is necessary to take into account the variety of labour relations existing within each small-scale production unit.

Chapter I, Section 1.2.1

2. Those who consider small-scale and artisanal production units to be dependent primarily on large-scale production firms fail to take into account the extensive dependence on private merchant-financers of such units.

Chapter I, Section 1.2.1; Chapter VII, p.190

3. Technological change in production processes may take the form of mechanization within a large-scale production unit; however, subcontracting to other types of production units should not be ignored.

Chapter VII, p.203

4. Trends in women's employment need to be related specifically to changes in technology and work organization at the level of the workplace rather than covered by the too general term of marginalization.

MacEwen Scott, 1986. "Women and Industrialisation: Examining the 'Female Marginalisation' Thesis", J. of Development Studies, vol. 22, no. 4, Pp. 649-670

5. For a proper analysis of women's contribution to production, it is necessary to add 'unpaid family labour' to the types of casual work defined by Bromley and Gerry.

R.Bromley and C.Gerry, 1979, Casual Work and Poverty in Third World Cities.
I. Tom, 1987, De Inschakeling van Vrouwenarbeid in de Indiase Zijdeindustrie.

6. The view of researchers from industrialized countries that job mobility is a positive goal is not shared by workers in developing countries, who consider job security a paramount goal.

Chapter IV, pp. 101-102

7. In India, random sampling too often leads to random answers.

Chapter IV, Section 4.1

8. Despite an improvement of national per-capita income in many developing countries, large groups of the population -- particularly women and children of poor households -- are experiencing a deterioration in consumption levels. For a better understanding of this contradiction, research into household distribution patterns is needed.

C. Safilios-Rothschild, 1980. 'The Role of the Family: a Neglected Aspect of Poverty'.

9. The equality between men and women in the Netherlands in terms of taxation will be improved when the revenue from sources other than their own labour are no longer added to the labour income of the highest earner.

10. A great variety of problems is caused by the simple fact that the cycle of most socio-economic and natural processes is longer than the average term in office of those in authority.