

**GENDER, FLEXIBILITY, SKILL AND INDUSTRIAL RESTRUCTURING:  
THE ELECTRONICS INDUSTRY IN INDIA**

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## **ABSTRACT**

Based on research on women workers in the consumer electronics industry in Delhi, India, this paper discusses recent changes in the situation of women workers, as the industry undergoes a major process of restructuring in response to the liberalization and globalization of the Indian economy in the 1990's. The first section presents the concept of **gendered labour regimes** as a framework to examine recent trends towards flexibility. In Section II changing policy regimes in the electronics industry are sketched upto the present period. Section III delineates broad patterns of continuity and change in relation to labour market flexibility highlighting the differentiation within the industry as well as differentiation within women workers. Examining the 'flexibility' of women workers through a gender lens, it is argued that industrial restructuring has intensified a pre-existing pattern of labour market flexibility. The dismantling of the organized sector through implicit de-regulation is extending these conditions of casualisation and insecurity to workers who had become 'inflexible'. Section IV re-examines the issue of gender and skill in relation to labour market demand for functional flexibility. It highlights the issue of the non-recognition of existing skills as significant in the context of trends in the industry where a dual process of a demand for more 'technically skilled' women has emerged alongside a downgrading of existing skill categories. In the last section, a proposal is presented for an alternative approach to skill assessments and job designations.

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## 1. INTRODUCTION

Recent trends in global industrial restructuring with moves towards more flexible production systems have raised new issues and questions regarding gender, flexibility, and skill in the present phase of globalization. Based on research on women workers in the electronics industry in Delhi, India this paper discusses features of gendered labour regimes in the electronics industry and recent changes within a broader context of intensified labour market flexibility as the industry undergoes a major process of restructuring in response to the liberalization and globalization of the Indian economy in the 1990's. The data is drawn from a much wider case study, conducted between 1993-1996, which looks at the operation of state, managerial as well as workers – men and women's own strategies/social practices/discourses, around work and the household. Using a framework that emphasizes the multiple identities of women, the effects of industrial restructuring on women worker's work and lives are seen in relation to their workplace, the household as well as the neighborhood.

This paper focuses on delineating broad patterns of industrial restructuring in the electronics industry. The first section presents the concept of **gendered labour regimes** as a framework to examine recent trends towards flexibility. In Section II changing policy regimes in the electronics industry are sketched upto the present period as the industry undergoes a major process of restructuring in response to the liberalization and globalization of the Indian economy in the 1990's. Section III sketches patterns of continuity and change in relation to labour market flexibility highlighting the differentiation within the industry as well as differentiation within women workers. Section IV re-examines the issue of gender and skill in relation to labour market demand for functional flexibility. It highlights the issue of the non-recognition of existing skills as significant in the context of trends in the industry where a dual process of a demand for more 'technically skilled' women has emerged alongside a downgrading of existing skill categories. In the last section, a proposal is presented for an alternative approach to skill assessments and job designations.

In India, the electronic industry caters primarily to the domestic market but most units also have export sections and since the 1990's, a large number of 100% export units are being established. The electronics industry is a modern industry projected to grow very fast in the next few years. It is also an excellent example of recent changes towards globalisation and liberalisation. This is not only due to the nature of the industry itself which is at the heart of the developments in new technology, tele

communications and the transformation of socio-economic life itself but also because India's experiment with liberalisation began with the electronics sector. The significance of the industry from our perspective lies in the fact that it has employed women in significant numbers and estimates are that it will continue to demand a women specific workforce in future. Women have formed around 30-40 per cent of additional manufacturing employment in the Indian electronics industry so far. Given the priority accorded towards employment creation in this sector, it is estimated that the factory employment of women in the electronics industry will grow by 25 per cent in the near future.<sup>1</sup>(Sen and Gulati, 1987, N. Banerjee, 1995)

The case study covers 24 companies, located in the industrial estates in Delhi, including large, medium, small and tiny units (employment size) manufacturing a range of electronic items. Delhi is the fourth largest location for the electronics industry in India. It has a significant position because of a large concentration of small-scale units making consumer electronic products and in 1994 per capita production in Delhi, at Rs. 1429 per person, was the highest of all other locations of electronic production. Delhi also has 9.40% of the share in total exports of electronic products, and provides the highest employment compared to other states. (Rajiv Rastogi, N R Tripathi and M. Venkatesan, 1996) The products include television sets, computers, radios, speakers, videos, cassettes, semi-conductors, relays and stabilisers. The sample includes a larger number of units producing consumer products, particularly televisions, which reflects the dominance of this item in the Delhi electronics industry.<sup>2</sup>

The analysis in this paper is primarily on the situation of women workers in relation to the labour market and the structures of the state, capital and patriarchies. At the same time, while discussing examples of specific discrimination of women *relative*

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<sup>1</sup>The employment potential of the electronics industry has to be treated with caution. A report prepared by the Institute of Manpower Research, 1991 for the Department of Electronics projects that employment would be created for 1528.5 thousand at the end of the VIII plan period. (IAMR, 1991). However this employment creation is mainly in allied and derived sectors rather than in manufacturing and there is no guarantee that women will have access to these new jobs.

<sup>2</sup>Detailed quantitative and qualitative data was collected based on interviews with women workers, men workers, managers, and trade unionists. 24 companies were selected from the Okhla Industrial Area where the electronics industry in Delhi is primarily concentrated. In the sample some units from NOIDA (New Okhla Industrial Area in the neighbouring state of Uttar Pradesh were included since a number of companies from Delhi were shifting units to that region. The total number of workers interviewed is 261. These include 132 currently employed women workers, 59 women and men ex-workers, and a control group of 70 men from the same units as currently employed women workers. The objective of quantitative presentation of the data is indicative rather than aimed at establishing statistical generalisations.

*to men*, comparative data on men and women workers is used to substantiate the argument.

## **2. CONCEPTUALISING GENDERED LABOUR REGIMES, FLEXIBILITY AND SKILL**

More than a decade of feminist scholarship on Third World female factory workers has led to the emergence of the ‘nimble fingered and docile’ women worker in electronic and garment export factories as ‘the paradigmatic subject’, the stereotypical image which emanates from numerous case studies. Concerned with the implications of the proliferation of TNC owned off shore factories, in particular across South East Asia and Latin America, and the emergence of a new female workforce, research findings were framed by the exploitation vs. employment/ personal autonomy debate. Both the need to lower labour costs and the possibilities created by developments in new technology in the fields of communication, transportation as well as in the labour process led to the internationalization of Fordist production methods. This took the form of location of the labour intensive assembly section in countries of the South while research; design remained in the North in certain industries. This led to the demand for a specific labour force - female, single, and young, hired to do what was termed unskilled manual work. These women workers were considered the ideal ‘flexible’ work force, with in built advantages of high labour turnover, docility, low wages and reduced social costs of reproduction.

In a critical assessment of the literature on women workers in export manufacturing Linda Lim raised a number of significant methodological issues. She points out that the stereotypical image of the woman workers emerged from studies done in the 1970’s which drew on data on the first phase of export manufacturing. This image, which tended, to be negative for women workers, was then generalized across space and time. More recent studies which focus on the current phase of export manufacturing have challenged the key characteristics of the stereotypical image in terms of the profile of women workers, the degree of ‘exploitation’ as well as resistance and organization. (A. Ong, 1991, Lim, 1990, Cecilia Ng, 1997). In an earlier article, Pearson also shows through a review of case studies on women workers in the electronics industry in the First and Third World, that employers deploy a variety of strategies to ensure that they get a compliant workforce, capable of high productivity. The case studies reviewed show that this objective does not always require a workforce which is young,

unmarried, unskilled and “virgin in terms of employment’. (Pearson, 1988, also see 1998)

While the equation of export oriented manufacturing with young unmarried women workers as the norm has been challenged, the fact remains that gender is a crucial factor in determining patterns of employment, the sexual division of labour is embedded in each social and technical division of labour and the deployment of specific managerial practices is also gendered. The concept of *gendered labour regimes* is useful in trying to map the combination of a specific constitution of gendered labour relations, with a specific labour process and managerial and state practices which enforce regulation in production through different methods of control/ coercion and consent. The concept is an attempt to bring together theorisation on *gender regimes*, (W. Connell, 1987, S Walby, 1997) with the formulations of labour process theorists on different kinds of *labour/factory regimes*. (M. Burroway, 1985, A.Friedman, 1979) However it is not used as a model but more in the sense of a structural inventory described by Connell i.e. it is an empirically based classification through the analysis of a particular institution.<sup>3</sup> The classification into different gendered labour regimes also facilitates assessment of changes because of industrial restructuring and the recent moves towards greater labour market flexibility.

The term *‘flexibility’* is widely contested. There is a large body of literature dealing with this ranging from policy documents to debates that are more academic. (Piore and Sabel, 1984, Pollert 1988, Elson 1996, ILO 1998) The emergence of this term, as A. Pollert has pointed out, is in many ways linked closely with the revival of neo-classical economics and the obsession with the 'free market'. The term is used loosely, has a variety of meanings and expresses different political positions, ranging from neo-classical liberals who see a flexible labour force as evidence of a dynamic free market economy to others who see it as leading to a dualism in the workforce and a new form of capitalist control, the Neo-Fordist response to the crisis of Fordism. (A. Pollert, 1991)

What significance do these discussions have for the Indian context? The Indian labour market has always been flexible in the sense that labour market regulations/protective legislation has rarely been extended or implemented for the vast ma

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<sup>3</sup> Connell offers an interesting set of principles, which organize gender regimes in production – the gendered logic of accumulation and the political economy of masculinity. (Connell, 1987, pp.119-139)



majority of workers. On the basis of the 1981 Census A Mathur has estimated that employment security provisions do not cover more than 12 per cent of 'main workers'.<sup>4</sup>(A. Mathur, 1992) The situation for women workers is much worse since only 6 per cent of women workers are in organised industry and services while 94 per cent are in the unorganised sector which has always been 'flexible'.

One could therefore dismiss the whole discussion on flexibility as being irrelevant to India, particularly if one is looking at women workers. However the term 'flexibility' is increasingly being used by manufacturers and policy makers in India and has been recommended by the World Bank. What is interesting is that it is primarily one dimension of flexibility that is emphasised - i.e. labour market flexibility. This is reflected in the assessment of the future growth of industrial employment in India by the World Bank. In delineating the disincentives to industrial employment growth, the report sees the main problem as due to the protection of existing jobs and a concern with specific firms and industries rather than the overall growth rate of industrial employment. It goes on to list the main disincentives as the legal framework and government apparatus regulating industrial labour, regulations restricting retrenchment of workers and closure of factories, statutory payment of annual bonuses and other benefits, increase in the direct cost of labour due to the substantial over-indexation of wages through the system of 'dearness allowance' and the ease with which tiny unions can be recognised. (World Bank Country Study, 1989, pp.112-114)

The main recommendation is to overcome these 'rigidities' by introducing labour market flexibility. Proposals have been put forward for instance to amend the Industrial Disputes Act, 1947 which restricts unilateral retrenchment in units employing more than 100 workers but so far no changes have been made due to political opposition. The push towards flexibility however is not just at the level of discourse or as an intention, but is also being implemented in practise. Even if there has not been *explicit labour market de-regulation* whereby formal legal regulations have been changed, in many industries there has been an *implicit deregulation* where existing legal regulations have been made less effective or completely bypassed.

In examining this process it is necessary to distinguish between old forms of flexibility which could be called **Seasoned flexibility** (forms which have been tried and

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<sup>4</sup> A Mathur elaborates the numerous ways in which employers escape from the employer/employee nexus as well as from coverage under labour regulations. A. Mathur 1992

tested over years) and new forms emerging as a result of the present phase of restructuring which could be called **Nascent flexibility**. Seasoned Flexibility and Nascent Flexibility are not mutually exclusive since the new forms are often adaptations and transformations of old ones. It is also important to distinguish the response of firms, particularly small units to cyclical fluctuations when they resort to flexibility and a more structural response towards flexibility. It is necessary to look at this issue in relation to specific industries and more importantly at the level of particular enterprises.<sup>5</sup>

Finally, given the multiple meanings of flexibility it is important to distinguish between different referents of 'flexibility'. There are three levels at which flexibility needs to be examined: a) in relation to the organisational structure of the firm which refers to subcontracting, relocation, backward integration, b) flexibility in the pattern of production which often refers to new patterns of work organisation. (one variant is 'flexible specialisation' which is defined as manufacture of a wide and changing array of customised products using flexible, general purpose machinery and skilled adaptable workers'.) Indicators include introduction of new technology, automation and changes in the labour process and job categories, job rotation, training workers for multiple jobs and finally c) labour market flexibility which implies changes in labour laws, work status and wages of workers.<sup>6</sup>

Functional flexibility relates to issues and debates on the *labour process* and *skill*. The recent discourse on flexibility argues for a major theoretical and policy shift from Braverman's significant work that linked mass production to a distinct managerial strategy of control -Taylorism, which through a long term process of deskilling leads to the degradation of work. (H. Braverman, 1974) Braverman argued that tendencies to

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<sup>5</sup>At the level of the enterprise the Deshpandes' study on Bombay Labour Market Flexibility has been one of the first to try to empirically substantiate some of the issues around flexibility, casualisation and feminisation. (S. Deshpande & L. Deshpande, 1994)

<sup>6</sup> The definitions and indicators have been developed on the basis of a critical review of exiting definitions. In particular see, Standing, G. 1986, ILO, 1987, Elson D, 1996. The results of these three kinds of flexibility - for the employer - is seen as an increase in:

-a. Functional flexibility - flexibility in terms of task - mobility across job boundaries- workers can be called upon to undertake a different range of tasks and skills that cut across former demarcations

.b. Numerical Flexibility: flexibility in terms of hours of labour - hours of work, in total and shift pattern and number of workers.

c. Financial flexibility: flexibility in terms of labour costs- particularly through minimisation of the **fixed costs** of labour i.e. reducing employment of full time permanent workers enjoying job security and pension, sickness and holiday benefits. (D. Elson, 1996)

wards deskilling and increased managerial controls would persist even with changes in technology and work organization. Further studies on the labour process and managerial strategies either challenged or extended his thesis highlighting the variability of managerial strategies, the resistance to control etc. (Friedman, 1977, Edwards, 1979, Buroway, 1979, Thompson, 1989). Recent discussions on flexibility and flexible specialization argue that changes in technology and work organization will make Taylorism obsolete as flexible manufacturing systems and manufacturing automation protocol will make craft like batch production possible with a core of polyvalent workers organized in self regulating work groups. Rather than de-skilling, it is projected that the move towards greater flexibility will require multi-skilling. (Piore & Sabel, 1984)

Feminist interventions in the labour process discussions have emphasized that the process of deskilling was not simply one of asserting control over an undifferentiated working class but was one that also implied male control over women workers. Numerous studies highlighted the various mechanisms whereby the sexual division of labour was embedded in each social and technical division of labour and technological changes involved a process of gendering. The use of pre-existing gender differences and the sexual division of labour within the household, the role of trade unions in preserving male enclaves, managerial strategies as well as gender identities and cultural processes all played in role in defining what is women's work and what is men's work. (Coyle, 1982, Cockburn, 1985) A significant contribution to the discussion on changes in the labour process and skill highlighted the fact that the definition of skill is an arbitrary process and rarely reflects the actual capacity of the worker. Women worker's skill designations are often predefined on the basis of their sex rather than through an assessment of their qualifications. Feminist research in the 1980's has highlighted the correlation between sexual power and skill showing that the distinction between male and female jobs as skilled and unskilled was ideological rather than based on purely objective attributes. (A. Phillips & B. Taylor, 1980)

A further contribution to the analysis of gender and skill was provided by analysis of women workers in third world manufacturing. Elson and Pearson pointed out that women were hired because they were seen as having natural/biologically given attributes such as 'nimble fingers', dexterity, better concentration, ability to do fiddly, detailed work, etc. They argued that far from being natural, these 'nimble fingers' are the result of training women receive as girls in domestic skills such as sewing, cooking within the household. (Elson & Pearson, 1981)

While these insights have been very significant, for some reason the implications of these contributions have not been followed through, particularly in the analysis of women workers in developing countries. The significance of socialization as ‘training’ is only dealt with to emphasize the social constitution of women as a specific labour force. The definition of women workers as ‘unskilled’ operators is accepted unproblematically and a simple equation of manual, labour intensive assembly with unskilled work is taken for granted.<sup>7</sup> There is little discussion of how skill categorizations could be defined and redefined due to managerial strategies as well as shifts in the bargaining power of men and women workers. More importantly, a historical perspective is missing whereby the years of work experience; changes in the labour process etc provide a different understanding of skill attributes than those defined by purely static technical criteria.

The issue of skill and job designations is only just beginning to be addressed in studies of women workers in the South.<sup>8</sup> Cecilia Ng’s study of two electronic companies in Malaysia explores worker’s self-perception of skill and the ambiguity around what is skilled work. (C. Ng, 1997) Martha Roldan’s study in Argentina showed the process by which women were redefined as operators even after they moved into male work areas. (Roldan, M. 1996). Studies of the garment and electrical fan industries in India have shown that where a skill becomes identified with women it ends up being valued less highly. (N. Banerjee, 1991, pg.19, see also I. Baud, 1989)

There remains however a disjunction between the theoretical insights as well as empirical evidence from research on women’s work and existing policies for changing the situation of women workers. The main policy recommendation in almost every document on women’s work is provision of training, upgrading to new skills. While this is certainly required, at the same time we need to address at a policy level the issue of *non-recognition of existing skills*. It should be stated here that one is not arguing for

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<sup>7</sup> Often statements are made which require further substantiation- for instance Sen and Gulati make a distinction between skills required in garment factories which are more technical and transferable and those in electronic factories which cannot be transferred. (G. Sen & L. Gulati, 1987)

<sup>8</sup> It should be noted that the process of gendering and the arbitrary nature of skill designations are equally applicable to men workers. In India studies have focussed on the informal/formal divide and highlighted the ways in which class and caste determine access to formal education and training. Breman’s study of urban workers in South Gujarat argues that given these constraints, a section of the ‘proletariat have no chance at all of penetrating to the arena of formal employment.’ (Breman, 1996, pp.117) He also points to the distinction based on gender within this category of workers where women are invariably designated as ‘helpers’ although the work they do is of a more substantial nature.

the absolute "subjectivity" of skills-there are differences in the content of work and variations due to changes in the labour process, which justify distinctions between unskilled, semi-skilled and skilled work. However, these distinctions need to be established rather than assumed to flow simply from technical factors.

This is being finally recognized at a policy level. The International Labour Organization in a follow up document after the Fourth World Conference on Women and the World Summit for Social Development has pointed out that many of the skills required in women's occupations are not reflected in job designations because "they are seen as "natural" female competencies, or because they mirror domestic tasks which women perform outside the workplace for free." (Lim, L.1996, pp.134) They argue that a response to the contemporary labour market demand for functionally flexible workers require policies that ensure that women are able to *transfer* their skills and qualifications, across industries rather than be limited to firm or industry – specific skills, and efforts should be made to ensure that women worker's skills are "marketable outside of a particular enterprise. (Lim. L., 1996, pp.116) This issue becomes significant given the recent trends in industrial restructuring towards more flexibility.

### **3. CHANGING POLICY REGIMES IN THE ELECTRONICS INDUSTRY IN INDIA**

The growth, structure and development of this industry can be divided into three broad phases each one reflecting different policy regimes. The first phase between 1970-1980 was characterised by self-reliance through regulation. Within the broader policy framework of import substitution and self-sufficiency, the television industry was set up with a bias towards the public sector and small-scale private enterprise. Indigenous Research and Development was supported and no foreign collaborations were allowed. The public sector concentrated on defence and communication equipment, power electronic equipment, instrumentation and components. The small- scale sector focused on the production of consumer electronics, primarily television at this stage. The manufacturing process consisted of manual assembly of mainly imported components. Government policy supported the small-scale sector and was a major factor in the growth of this sector. In 1974 an export processing zone, Santa Cruz Export Processing Zone (SEEPZ) was started near Bombay, exclusively for the production of electronic products. However the electronic industry's growth during this period was based

primarily on the domestic market. Televisions for instance recorded a relatively high rate of growth, as compared to other electronics products.

In 1981 a new phase began with policy measures initiated in the electronics industry, based on the recommendations of the Sondhi Committee in 1979, and a shift in the general policy environment towards liberalisation. The policy package called Integrated Policy Measures on Electronics, was announced in March 1985, with the perspective of improving productivity and efficiency in different sectors of the national economy. Liberalisation during this period was not completely open door but cautious and selective.

During this period a number of large firms entered into electronics production. There was a tremendous expansion particularly in the manufacture of colour television sets. The structure of the industry that had hitherto been primarily concentrated in the small-scale private sector with a few large public sector units now changed. There were two processes whereby large firms became significant during this period: through the entry of large industrial houses (MRTP) and foreign controlled companies (FERA) and secondly through the "graduation of small scale units through expansion". (K.J. Joseph, 1989) This process was often accompanied by a shift in production items. A number of units which produced audio items - radios, tape recorders, calculators discontinued the manufacturing of these items and shifted to colour T.V. and in some cases VCR. (T.S. Papola, 1989)

A significant feature of the industry was the extent of **subcontracting**. Initially small scale units were expected to be integrated independent units, undertaking design, product development, manufacture, testing and marketing as well as after sales service. However, since most of these units lacked infrastructure and finances to manage, they ended up as dependent on one or two large customers for job work. (Annavjhula, J.C. Bose, 1987) At the same time, large units resorted to subcontracting in two ways - commercial and industrial. A major impetus for subcontracting was lower labour costs and an attempt to avoid dealing with a unionised workforce. In fact the 1980's was a period when employers resorted to subcontracting on a large scale in many industries as a strategy to undermine the strength of a unionised and organised workforce. In Bombay companies such as Murphy and Bush transferred total production to subcontracted units while workers in the main plant in Thane were without work. (A. Shrouti & Nandkumar, 1994)

By 1990 the boom in production was over and sunset haunted the industry. 1991 showed a negative growth rate in real terms and the period between 1989 to 1993 saw the electronics industry in the grip of a severe recession. (P. Chakraborty, 1993) The worst affected were the T.V. and components sectors. The crisis hit small-scale units which had proliferated during the early eighties boom period. Already between 1984-1987, out of 460 firms, which were granted licenses, 167 units closed down, after selling only a few sets. In 1991, it was estimated that nearly 30 per cent of the small units would shut down. In 1992 there were reports of 101 units out of a total of 335 closing down. (*Financial Express, April, 1992*) The journal of Consumer Electronics and TV manufacturer's association (CETMA) reported that 50 members had left because they had closed down their units. (*CETMA, August 1995*)

The present phase has ushered in full-fledged liberalisation with globalisation. In 1991 the New Economic Policy initiated structural reforms in the Indian economy, propelled by an external debt crisis. However, as noted earlier, from the mid-seventies through the eighties there has been a process of 'creeping liberalisation' and the drastic measures introduced in 1991 have to be seen in the context of changes that had occurred in many sectors in the earlier period itself.

The 1993-94 budget was termed by many as the budget for the consumer electronics industry. The government reduced excise duties, reduced customs duty and boost consumer finance, recognising the need to revive the TV industry. While some large companies such as Onida, Videocon and BPL benefited from these measures and their sales went up, other sectors of the electronics industry such as components manufacturers were badly affected due to the convertibility of the rupee.

In the second phase of reforms the electronics industry was opened up almost completely to global competition as the giants entered into electronics production. The lowering of import duties on imported electronic equipment, (initially reduced from 250 per cent to 150 per cent and then to 100 per cent) bought in as personal baggage, meant that foreign brands would compete directly with Indian ones. Indian manufacturer's reactions ranged from stating that this would mean " the death knell for the indigenous industry " to a more cautious response calling for a "level playing field". (*Financial Express, May, 1993*) Indian TV manufacturers felt that the industry needed at least four to five years more of protection, since the industry was in the process of restructuring to establish international quality standards.

The threat of competition was at this stage countered by statements that domestic manufacturers had a well developed vendor network as well as service centres and multinationals could not enter so easily. However, apart from competing with foreign brands imported into the country, the liberalisation of foreign equity restrictions has meant the direct entry of multinationals into the country. By the mid 1990's a large number of Indian TV companies had linked up with multinationals for domestic manufacture of international branded electronic products.

Global competition has forced domestic companies to initiate more intensive programs of restructuring. The industry continued to show low growth rates through till 1995. In September 1995, the Planning Commission constituted a Working group on Electronics and recommended a goal of a growth rate of 32 per cent. In April 1995 M/s Arthur D. Little commissioned to do a study on the TV Manufacturing and Electronics Component Industry, projected that the Indian T.V industry could target 11 million sets of production by the year 2000<sup>9</sup> This would be done through increased exports and linkage with foreign companies.

The trend of international and domestic subcontracting was further intensified with large firms tying up with Phillips, Goldstar, Delta Hamilin, Motorola etc and all the small and tiny units tied into subcontracting relations with a number of large firms. Other moves within the industry include large companies such as Videocon going in for synergy and starting its own ancillaries to ensure quality control.

By 1996 domestic manufacturers in the electronics industry began to change their attitude towards multinationals. 'Foreign friends, partnership and collaboration' became the new buzzwords. Behind the scene, domestic manufacturers were engaged in yet another phase of restructuring to meet the challenge of multinationals by introducing even more 'flexibility' in the organisational structure of companies, in the labour market, as well as in product items.

### **Gendered Labour Regimes in Delhi's Electronics Industry**

The broad trends noted above in relation to the electronics industry bring out the high degree of **differentiation** within the industry. The 24 electronics companies examined in the case study could be classified according to a broad 4-fold typology of

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<sup>9</sup> The firm Arthur D. Little had been commissioned to make recommendation for the Mexican maquiladoras in the 1980's.



*gendered labour regimes*. The classification highlights managerial *strategies* of restructuring which vary sharply depending on the size of the unit, labour process, organisation of work, product demand, market orientation, composition of the work force (age, gender, caste, marital status, education, etc) and a range of other factors. Managerial *practices* on the other hand vary from factory to factory.<sup>10</sup>

**TYPE I:** Classic low road screwdriver pattern: Tiny and small units, located predominantly in flatted factories, forming part of the unregulated sector.<sup>11</sup> The production units consist of a room often 4m by 6m, with poor ventilation and lighting, filled with the smell of chemical fumes. Less than 6-10 workers sit at two or three tables with mounted boards assembling imported kits. Wages are very low; there are no benefits, no job designations. Women are hired but fewer than men. Work discipline is maintained by the direct supervision of the employer who sits in a small cabin behind a glass screen. Relations are personalised, with management practices of control shifting between despotic and paternalistic methods. While the death rate of these units is high, survival depends on extreme flexibility and is contingent on a quick shift in product items since labour is anyway flexible.

**TYPE II:** Taylorist mass production: Medium and large units which had set up production in the 1980's boom and are now faced with extreme competition and the burden of an older production process as well as unionised, long term workers. The main method of restructuring has been a ban on new recruitment as well as direct reduction of workers through closures and relocation of units to low wage areas such as NOIDA in neighbouring states, forced voluntary retirement, coercive use of disciplinary action after forced transfers, false cases etc. Large numbers of women were employed on mass production as well as batch production systems, mainly involved in soldering components from imported kits. Known as factories run by traders rather than manufacturers, these units continued to rely on cheap labour rather than new technology to deal with competition.

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<sup>10</sup> See R.E. Pahl for a useful distinction between managerial practices and strategies. (Pahl, 1988)

<sup>11</sup> Companies have been classified on the basis of the number of workers employed to enable identification of units where the Factories Act and other labour legislation is applicable. Using the criteria of employment the universe of companies were divided into five classes - Large: 101 -500 workers, Medium: 21-100 workers, Small: 11-20 workers, Tiny 1-10 workers, Non-unit/Homebased workers. The sample has a larger number of companies as well as workers in units employing more than 101 workers. However, a number of the large units (employment size) are registered as small scale industries, with a capital investment upto 60 lakhs, although they employ more than 300 workers.

**TYPE III.** Large units with foreign collaborations since the 1980's, particularly with Japanese firms, which have gone in for automation. Large numbers of women are employed on continuous process assembly belts, paid minimum wages and benefits to a large extent and professional managers attempt to transplant Japanese management techniques through in house work councils etc. In most of these units there were no unions. Restructuring in these units has mainly taken the form of transferring workers from bargainable categories to non-bargainable categories, increasing recruitment of temporary, casual and contract workers, making support staff non-permanent, downgrading scales and designations to circumvent the Minimum Wage Act, withdrawing benefits and bonuses.

**TYPE IV:** Newly set up large units with Japanese collaboration such as Panasonic, which are located in low wage industrial estates. The production process is modern and highly automated. For example, Panasonic has an Auto Insertion Plant, which inserts 350 components automatically, monitored by a few male operators. These are then put onto a continuous process conveyor belt at which 200 girls sit in rows, inserting components. At different stages the PCB's pass through a solder bath which fixes the components. VDU's monitor for faults along the line at the end of which girls and boys check for quality. In the final assembly, which is done by men, the PCB's are wired onto the cabinets, undergo further quality control checks and then sent off for packaging. Workers are monitored through computerised checks as well as line, floor and department supervisors. These companies are investing in training some women workers.

Despite this differentiation, the overall strategy is predominantly reduction of labour cost i.e. financial flexibility. Companies appear to be following a two step process of restructuring. The first step is casualisation of the workforce. The next step is redundancy of the existing workforce and relocation of units to lower wage areas with a temporary workforce. Aggregate data from the 24 companies studied on restructuring in the last five years shows that 29 per cent of the companies had made all support staff non-permanent, 17 per cent of the companies had transferred production workers from permanent to non-permanent categories and in 17 per cent of the companies all jobs were non-permanent. Except for Type III and Type IV, the main concern is quick profits with little investment in infrastructure or workers. The classic method for this is re-naming the unit every five years and re-employing workers as temporary, thereby wip

ing out their service record. This is done to avail of tax benefits and other concessions provided to newly established small-scale units.

The differentiation of companies into four broad types needs to be kept in mind as we move on to discuss how far women workers constitute a flexible labour force.

#### **4. WOMEN WORKERS AND LABOUR MARKET FLEXIBILITY IN THE ELECTRONIC INDUSTRY**

In this section a panoramic picture of women workers in the electronics industry is presented with an exploration of how far they constitute a flexible labour force. Keeping in mind the issues of *continuity* and *change*, (i.e. seasoned and nascent flexibility), the current status of women workers is discussed in relation to the following indicators of labour market flexibility:

- a. employment of a non-permanent workforce: work status; type of contract; shift from permanent to non-permanent workforce.
- b. ability to regulate working hours according to need: restriction on night work for women after 7 p.m., hours of overtime, compulsory overtime
- c. ability to raise and lower money wage rates in line with the profitability of the firm: changes in Minimum Wage regulation, wage systems, productivity and incentive schemes
- d. attempts to change legal regulations, customs, and practices that govern the labour market so as to make it easier for management to hire and fire workers.
- e. attempts to change laws that ensure workers right to organise and represent their interests: ban on organising or restrictions, trade union presence, changes in the Industrial Relations Act.

All these indicators (except working hours) have been combined to assess the existence and impact of legal regulations. Using a labour status approach, the focus is on three dimensions of protection and security - employment security, income security and labour representation security.

**1. Employment Security: job status and nature of contract**

**2. Income Security: minimum wages and benefits**

**3. Labour Representation Security: trade union**

A composite index was formulated including work status, nature of contract, legally entitled benefits, minimum wages and trade union organisation. The index results

led to a classification of women workers into six Labour Status Categories.<sup>12</sup> Women electronic workers who have lost their jobs recently have been separated and classified on the basis of data relating to their jobs before job loss. The Labour Status Index was correlated with size of unit, marital status, age and years of service to highlight some characteristics of each category.

**Table: A Labour Status Categories: Women Electronic Workers**

Category	Label	currently employed	* ex – workers	Row Total
I	Protected, Secure Above Minimum Wage Standard	18 12.85		12.85%
II	Protected, Secure, Within Minimum Wage Standard	42 30.00	8 5.71	35.71%
III	Unprotected, Marginally Secure, within Minimum Wage Standard	38.00 27.14		27.14%
IV	Protected, Insecure, Below Minimum Wage Standard	6 4.28		4.28%
V	Unprotected, Insecure Below Minimum Wage Standard	22 15.71		15.71%
VI	Destitute Workers	6 28		4.28%
	Column Total	132 94.28	8 5.71	140 100.0

\* 20 women ex-workers do not fit the categories because although they are protected and have a trade union their wages are below the minimum wage standard.

*Category I: Protected, Secure, above Minimum Wage Standard*

13 per cent of the sample are workers who are permanent, with written contracts, receiving all benefits as well as wages above the minimum wage are. These workers are young, with an equal number of unmarried and married women. Concen

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<sup>12</sup> The labour status approach has been very usefully developed by John Harris, K.P. Kannan and Gerry Rodgers, 1990. In this paper, the focus is on different dimensions of protection and security rather than regularity and autonomy of different kinds of work. The application of this Labour Status Index results in different categories of workers in different industries. See Shah and Gandhi (1998) for the plastics processing industry and S. Gothoskar, (1997) for the pharmaceutical and toiletries industries.

trated in large units, they had worked more than three years in the same unit, with some who had worked for even longer, even more than twenty years.

*Category II: Protected, Secure, within Minimum Wage Standard*

36 per cent are workers who also have employment security in the form of permanency with written contracts, and receive all legally entitled benefits. Their wages are within the minimum wage standard for semi-skilled and skilled workers. They are also unionised. The workers are mainly young, and unmarried, with a few divorced women. All of them belong to large scale units and have worked more than three years at the same job.

*Category III: Unprotected, Marginally Secure, within Minimum Wage Standard*

27 per cent of the workers do not have a written contract, although some of them are permanent workers. They have some benefits with wages at the lower scale of the range within the minimum wage standard. These workers belong to units that are not unionised. These workers are young, with an equal number of married and unmarried women. Again most of them are in large units but some were in tiny units. They had worked a range of years with almost an equal number who had worked less than one year and those who had worked more than ten years.

*Category IV: Protected, Insecure, below Minimum Wage Standard*

4 per cent are workers who are unionised but have wages below the minimum wage standard for unskilled workers. They have permanent and temporary work status, some have a written contract as well as all benefits, but the distinguishing characteristic of this category is wages below the minimum wage. They are young, unmarried and married, all working in large-scale units. All of them had worked longer than three years with more than half who had worked more than five years in the same unit.

*Category V: Unprotected, Insecure, below Minimum Wage Standard*

16 per cent are workers who are non -unionised, are temporary, with no written contract. Some of them have a few of the legally entitled benefits but all receive wages below the unskilled minimum wage standard. These include the very young, young and some in the prime age group. They were mainly single women of whom a large number were unmarried, and a few divorced and widowed women. Most of them were in large

units, but some were in small and medium sized units. These were recent entrants into the labour market, the majority having worked for less than three years in the units, with only one woman who had worked for more than five years

#### *Category VI: Destitute Workers*

4 per cent of electronic workers are temporary, contract and homebased workers with no written contract, no legally entitled benefits and no trade union organisation. Their wages are far below the unskilled minimum wage standard. The workers are very young and young, and include married and unmarried women. They are all homebased workers and have been doing this work for less than three years.

### **General conclusions from the labour status categorisation**

#### *1. Blurring of organised /unorganised sectors*

The most striking conclusion of the labour status categories is that the distinction between the formal/informal, organised /unorganised sectors dissolves. Apart from the top and bottom category which represent the two poles of formal and informal sectors there is a range of work statuses, insecure contracts and inadequate wages across different units, highlighting the fact that even workers in the organised sector do not have regular, permanent well paid jobs. The distinction of a core and periphery workforce as one in which men are the core and women in the periphery cannot capture this wide variation even amongst women workers.

#### *2. Women workers also in upper levels of organised sector*

Another important dimension emerges which leads one to question the stereotype of women workers as only irregular, casual workers who are low paid, the poorest of the poor. It is still true that the majority of women tend to be in the unskilled, lowest paid dead end jobs, and that they form 96 per cent of the unorganised sector. Nevertheless, since the 1960's in many industries, as a result of unionisation and struggles a section of women workers have been able to move into better paid and secure jobs - this is reflected in Category I and II.

#### *3. Unions significant in ensuring employment security*

Both the top categories consist of workers from units that are unionised. The presence of a trade union is significant in ensuring employment security. 50 per cent of

the workers are unionised and of these 66 per cent are permanent workers. Even if women do not participate actively in the trade union there is a spin off effect in terms of a general improvement in working conditions.

#### *4. Dismantling of the organised sector.*

Category I and II are under attack today. The category of workers who are protected, secure and getting wages above the minimum wage standard is high but in fact it includes workers who have lost or were losing their jobs during the period of research. Amongst the workers who have lost their jobs, most are either working in the unorganised sector or are unemployed and would today fall into the category of Destitute Workers. The elimination of this generation of workers with long labour histories has serious consequences both in terms of its effects on a younger generation of women workers as well as the reversal in their lives after job loss. A case study of 46 men and women workers who lost their jobs shows that women were now subject to greater surveillance, spoke of a loss of autonomy and dignity. For men the crisis of job loss went deeper and was experienced as a loss of male identity and a number of cases of depression and suicide were mentioned.<sup>13</sup>

#### *5. Large units offer better employment conditions*

Women workers have better working conditions in larger units and all the workers with wages above the minimum wage standard were in large units. Workers who were getting all the legally entitled benefits were from large units. It is also in large units that a new area of employment is opening for women workers where employers invest in training, higher qualification and skill requirements which mean also provision of better wages and benefits/incentives but not necessarily job security. Some women are entering these new jobs, in Type III and Type IV units.

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<sup>13</sup> The case study on job loss also brings out a significant difference between men and women in terms of opportunities for work after job loss. After two years of job loss, half the workers were still unemployed, while others were self employed, or involved in irregular jobs in the unorganised sector. Only two workers - one man and one woman had got permanent jobs again in an electronics factory. While a number of men were able to be self employed ***not a single woman could move into self-employment in spite of having the same skills and educational level as the men.*** (see A. Chhachhi, 1997 for a more detailed discussion on the gendered experience of job loss)

#### *6. Reduction in workers getting minimum wages:*

There are wide variations in wage rates within an occupation and the differentials are more significant between women workers than between men and women workers. Given the arbitrary basis of wage determination the only measure to assess wages becomes the statutory minimum wage. Unlike other states, the Delhi Administration has been revising the minimum wage every six months in the past few years. A comparison of the number of workers receiving the statutory minimum wage between two wage revisions shows that while in 1994 there were 42 per cent workers below the minimum wage, within the space of a year there are 57 per cent below the minimum wage. (Table: 1) The trend overall seems to be the social exclusion of sections of workers from entitlements to minimum wages.

#### *7. Reduced length of service*

The number of years a woman has worked is also significant in ensuring security. As we go down the hierarchy the number of years of service also declines. In fact in category VI, the workers are new entrants into the labour force, 69 per cent having worked less than three years. This indicates that the new jobs available in the last few years are vulnerable and insecure.

#### *8. No trend towards homebased work*

Although projections have been made regarding the growth of homebased work in the electronics industry, the few cases of homebased workers in the Delhi electronics industry in the case study were working from home due to personal contacts based on trust. These appeared to be exceptional cases and did not point to a tendency of the industry towards putting out work to homebased workers. This is mainly due to the fact that imported kits are used for assembly and the components considered too expensive to risk putting out to homebased workers. In large and medium sized units the pressure for quality control was given as the main reason for not putting out work to homebased workers.

#### *9. New entrants are largely single women*

Interestingly all the categories had a mixture of married and unmarried women but in Category VI which is composed primarily of new entrants there were a larger number of single women - unmarried, divorced and widowed. The terms and conditions



of new opportunities of employment seem to be best reflected in this category - a casualised, unprotected, insecure workforce, getting very low wages.

#### *10. Increase in Contract labour*

There has been an increase in contract labour in Type II and Type III units.<sup>14</sup> A mechanism to maintain a casual workforce is to label them as contract workers. In most cases the contractor is imaginary and the workers only discover that they have been labelled contract workers when they should be made permanent. True contract labour (i.e. where recruitment and work is done through a contractor who is responsible for the workers) is used in the electronics industry in two ways: night shift and for work on holidays as well as replacement labour during disputes. In some firms, 75% of production is carried out by contract labour. Contract workers are hired for six months at a time, usually in the same factory. In some cases, the contractor had a deal with two or three units, often belonging to the same company, and contract workers circulated every six months between these units. This is similar to the circulating contract labour pattern found in the pharmaceutical industry. (S. Gothoskar, 1997)

### **Flexibility in working hours**

#### *a. Demographic composition of the work force*

It has been projected that the requirement of flexibility in working hours makes employers prefer young, unmarried women since youth implied a natural turnover as young girls left to get married and single, unmarried women were unencumbered with domestic responsibilities and could therefore be available for overtime. The age distribution of workers in the case study does seem to confirm that the 'typical electronic woman worker' is young. 76 per cent of the workers were between the ages of 21-30 years. A significant number were even younger i.e. 12 per cent between the ages of 15-20 years, while 11 per cent fell into the age group 31-40 years with 1 per cent in the middle age 41-50 years category and none in the elderly category. (Table: 2) However, a clearer picture emerges if we look at other factors such as entry into the labour market and individual and household responses.

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<sup>14</sup>In Type I, the workers are anyway all temporary and in Type IV, the system of apprentice/trainee is used to keep production workers on insecure contracts for two years.

These women had entered the labour market in different periods. 36% had been employed at their present job in the 1990's with 17% of these recent entrants having worked less than a year in the present job. 42% of the women workers had worked between 3-10 years and were employed in the 1980's. 20% of the women had worked from 10 to over 20 years and had been employed in the 1970's. Women who had entered the labour market in the 1970's and 1980's and were now in the prime and middle age groups had been employed in the same company and this was their first and only job (75%).

There was a clear difference with the women who had entered the labour market in the mid- eighties to early nineties, who were predominantly all young and very young and had also worked elsewhere before joining their present job. About a quarter of the women workers in the sample had done one or more than two other jobs before working in the present company. Younger women entered an insecure labour market in the nineties and seemed to be more 'mobile' than older workers.

It is important here to stress that apart from employer preference, individual and household strategies of reproduction play a significant role in determining the pattern of women's employment. (See D. Wolf, 1992, for a critique of 'household strategies') Earlier studies on women in the garments and electronic industries in India had pointed out that one reason young women have started working in the electronics industry was as a short term household strategy to earn their own dowries. They all saw their work as transitory, a good dowry as a passport to marriage in a higher economic group and marriage as an exit from factory work. (Chhachhi & Pittin 1996) However, there has been a change in this pattern of labour deployment by households as well as in the self-perception of women workers. In a study done in 1987 of electronic women workers and confirmed by the present study we find that women who had entered the labour market as "daughter's" in the 1980's were still working, some married and others still as single women. In the case study a large section of women in the sample - 65%, across all the age groups, had started earning when they were between 16 -20 years old.

There has been a significant change in perception from the notion of jobs as "time pass". Most of the young unmarried women wanted to continue work after marriage, saying that given the price rise it was impossible to manage on one income these days. Women employed in the small and tiny units did dream of leaving - not out of the labour market but to better jobs. The idea of a 'natural turnover' does not hold true anymore.

*b. Domestic responsibilities and flexibility*

Is there a significant difference between married and unmarried women in terms of domestic responsibilities? Does this restrict them from overtime or working longer hours when required? large number of women, 56% were unmarried, 35% were married, with 6% divorced and 3% widowed. (Table: 2)<sup>15</sup> Except for very few unmarried women who did no domestic work at all, more than half of the women in the sample did do some work in the house ranging up to three hours daily. More than a quarter of all women workers worked even longer hours at domestic chores ranging from three to five hours daily. It is married women who spent longer hours on domestic labour. Widows also did longer hours of domestic work, from three to over five hours daily. The data does show that unmarried women did fewer hours of domestic labour in comparison to married women. In fact no unmarried woman did more than five hours daily.

Combining factory working hours with domestic labour hours showed that over half the women (58%) worked 11-12 hours daily, 29% did on an average 12 and a half-hours daily while some women (3%) were working 13 and a half hours daily. Very few women did no household work at all (9%). (Table: 3)

Despite these long hours for factory and domestic work, over half the women also did overtime. Overtime was a regular feature in many units in the electronics industry<sup>16</sup> Amongst the women who did do overtime a quarter had no fixed hours for overtime while the rest worked 1--3 hours. (Table: 4) Given that over 45% of women workers in electronics had regular overtime, excluding those doing one hour daily, the total working time increases to 13-14 hours daily for a major section of the electronic workforce. In some cases, women had regular overtime on a holiday, which meant a seven-day working week. Overtime was compulsory for many of the women and here too both married and unmarried women were represented. It is also interesting that there was not much difference between married and unmarried women amongst those who did not do overtime at all.

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<sup>15</sup> Single women i.e. unmarried, divorced and widowed do form a large percentage together (63%) but it is important to distinguish **daughters** and **childless single women** from **single or married mothers** since the advantages employers derive is from a reduction in the social costs of reproduction as well as reduced domestic responsibilities of the former section of women.( Stichter and Parpart, 1990)

<sup>16</sup> Overtime is the classical adjustment mechanism and it has been pointed out that in-spite of double rates, it is still cheaper than hiring additional workers since non-wage costs are linked with levels of employment not working hours. In addition, it ensures absolute flexibility. ILO, 1998, pg. 83)

A constant and consistent complaint of managers and employers, often the only one about women workers, was that they take leave very often. In response to a question on how far domestic responsibilities had affected their job 69% of the women said that there had been no adverse effect. However, there were a significant number of women who had found that having to take leave frequently had resulted in a reduction of their wages or had been threatened with dismissal, refused increments and promotions or permanency. One woman left her job when she had a baby since the company refused to pay maternity benefit or give her time off. She came back to work after one year in a temporary position. This seemed a common pattern in small and tiny units. Here again it appears that where women are forced to take leave to carry out domestic responsibilities, employers simply use coercive methods to ensure that workers are available when required.

So far as flexibility in working hours is concerned then, in spite of married women's greater involvement in domestic work, there was very little difference between them and unmarried women in being available for overtime and extra work. The main restriction on flexible working hours is the ban on night work. The Study Group on Electronics Production for Exports for Ninth Plan recommendations for the 1997 budget includes a proposal to amend labour laws to allow women workers to work three shifts in the electronics industry.<sup>17</sup> Employers in this industry therefore do prefer women workers, irrespective of marital status, and are pushing for lifting legal restrictions on the hours of work.

### **So do women workers constitute an ideal, flexible, labour force?**

The fit between women workers and flexibility has to take into account the differentiation between women workers themselves. Rather than the static profile of the woman electronic worker as only young and unmarried, the picture that emerges from the case study is multi-layered. The female workforce in the electronics industry consists of different generations of women workers - new entrants who are young and unmarried, young married women who have worked for a long period, and older, married women with over 10-20 years of service. This age structure is already changing as we see that it is women in their late thirties and above who are losing their jobs. It is the

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<sup>17</sup> CETMA NEWS: a journal of Consumer Electronics and TV Manufacturers Association, Edit, Nov.1996.

last section which is under threat, not so much due their age, but due to their high degree of unionization and politicization as a result of long years of factory work as well as a strongly developed worker identity. In the present situation, the push towards greater flexibility in the workforce seems to be related less to age and marital status preference and more to unionization.

This does not mean that employers do not prefer young unmarried women. If managers in the Japanese multinational firm Panasonic could be taken as representative of the new industrial culture then they clearly state that their preference is for ‘fresh green labour’ - young girls, recruited from rural hinterlands. However there is a difference between **employer preference** and **employer acceptance**. This means that while employers would like ideally to have young unmarried women workers, they are not averse to also employing married women **as long as they can treat married women as if they are unmarried**. This is related to different managerial strategies of restructuring as well as managerial practices of control and the elicitation of consent in different types of gendered labour regimes mentioned earlier.

As a result, in practice, recruitment is more variable. Employer preferences for women workers could be seen on a continuum ranging from an ideal preferred workforce to the least desirable workforce. Workers in the electronics industry represent in a microcosm the composition of the working class in Delhi’s industrial areas. A large number of women workers are from Delhi itself with an increasing number of primarily single migrant women workers from Kerala. Amongst male workers there are a larger number who are long distance migrants from rural Uttar Pradesh, Bihar, and a few from neighbouring Haryana.<sup>18</sup> Employers in Delhi industrial areas have shown a strong preference for migrant women workers from Kerala. Added to the advantages of being migrants, employers also prefer these women due to their perception that they are better educated, although in terms of educational qualifications, local women recruited need to have the same qualifications. A number of managers in the Okhla Industrial Area stated that the most “difficult” women were older unionised women who tended to use their permanent status for more flexibility in relation to factory work due to the addi-

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<sup>18</sup> A survey of 500 workers in the small manufacturing sector in Delhi found that Bihar and Eastern Uttar Pradesh supplied the largest number of workers (71.8 per cent) with 10 per cent from Western Uttar Pradesh and the remaining from Delhi and Haryana. (CEC: 1993) The study does not mention workers from South India who form a growing section of the workforce employed in the electronics and export garment factories.

tional burden of domestic work. The continuum would move from the ideal flexible labour force of young, unmarried, rural, migrant women, to non-unionised - married women who can be treated as if they are unmarried, to non unionised- married, to older women who are non-unionised and finally, the most *inflexible* workforce being married older women who are unionised.<sup>19</sup>

The discussion above brings out clearly that women workers in the electronics industry already constitute a flexi- labour force. For those at the bottom of the hierarchy this is just an aspect of the *continuity of seasoned flexibility* but a significant conclusion from the study is that women workers who have been protected and secure are now threatened with job loss. Industrial restructuring has intensified a pre-existing pattern of labour market flexibility and is extending these conditions of casualisation and insecurity through the dismantling of the organised sector to categories of workers, who through years of struggle and organisation had become 'inflexible'. This is a major reversal of a process, albeit slow, through the past decade when women workers were being able to assert their rights through organisation.

## **5. GENDER, SKILL AND THE LABOUR PROCESS**

In the context of the broad trends sketched above, and the demand for 'functional flexibility' this section explores the linkage between skill designation, wage levels and recognition of women's skills. For the majority of women workers in the case study, skill designations are arbitrary. The issue of skill designations however becomes significant as industrial restructuring is resulting in the emergence of a new category of workers with 'technical' qualifications, primarily in newly set up units (Type IV) even as another process of downgrading of skills and scales occurs in older units facing competition.

### **Sexual Division of Labour and Gendered job Hierarchy**

The electronics industry is characterised by a wide range of technologies ranging from simple screwdriver assembly of imported kits to highly automated modern

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<sup>19</sup> Unionized women tended to use their legally entitled benefits even more than unionized men. For example, women would take leave if they were sick, knowing that there was no one to look after them or the household if they were unwell. On the other hand, men tended to continue work until they fell very sick. Sujata Gothoskar has also noted this in her study on women pharmaceutical workers in Bombay. (S. Gothoskar, 1997)

plants as seen in the range between Type I and Type IV classification of gendered labour regimes. Whatever the level of technology, there exists a sexual division of labour in the production process with women doing certain jobs and men doing other jobs. Women workers were still predominantly involved in assembly work 37% while 23% were doing soldering, 3% only supervising, 2% chassis finishing, 6% in house repair while 27% were involved in multiple tasks which included assembly/soldering.

There is also a clearly gendered job hierarchy. There are very few women working as assistant technicians or junior engineers, and none in the senior categories of engineer, technician, foreman, etc. Within the supervisory category there is also a hierarchy with women reaching the level of floor or line supervisors but not supervisors of the whole department. The range of wages between the maximum that women workers get and the maximum that men workers get is wide, illustrating the restriction of women in lower levels of the job hierarchy. In large units 53 per cent of men's maximum wages were higher than women's maximum wages and in only 16 per cent the maximum wages for men and women were equal. The starting wage in most units tends to be the same. In tiny units women workers were employed only on assembly work while young boys were employed as helpers to shift machines, clean and oil machines, carry boxes, etc. These boys were getting lower wages than the women. Significantly, there were wide wage differentials between women workers themselves in the same job. (Table: 5) It is on the upper end of the job hierarchy that wage differentials between men and women are most stark since women are either non-existent or underrepresented in these occupations.

These differentials were perceived as due to the presence of a technical degree or seniority and experience. However the assessment of a technical degree, experience and recognition of length of service was a gendered process in which women workers had to work longer years before wages would increase, if at all, and their skill and work experience continued to be unrecognised. A comparison of educational levels and employer defined skill designations of men and women workers from one company Weston Electronics, illustrates the differences between men and women in relation to skill recognition.

**Table B: Weston Workers Education and Skill designations**

Skill	Illiterate		literate		SSC fail		SSC pass		12 <sup>th</sup> pass		Graduate		ITI diploma		Total Nos.
	M	W	M	W	M	W	M	W	M	W	M	W	M	W	
Skilled	-	-	2		2	-	5	4	1		1	-	8	2	25
Semi-skilled	-	-	2		3	-	-	-	-	-	-	-	-	-	5
Unskilled	1		3	6	1	6	1	2		2	1	6	-	-	29
Total	1	-	7	6	6	6	6	6	1	2	2	6	8	2	59

(Percentages have not been calculated since the numbers are small)

As stated earlier, the lack of fit between educational levels and skill designations applies to both men and women workers and is arbitrarily fixed for both. However, the figure above shows clearly that men predominate in the skilled category even though their educational qualifications range from functional literacy to a technical diploma/degree. Women on the other hand are concentrated in the unskilled category in spite of the same spread of educational levels. The only clear indicator of being skilled is an ITI diploma/degree and here both men and women with these degrees are designated as skilled workers. The next section discusses the effect of different assumptions that operate in skill designation and recognition of the nature of men and women's work as well as their capacities. Women are assumed to be unskilled and lacking in the capacity for 'skilled work' even though they are skilled, while for men, the fact of being men is itself a capacity, a qualification which makes them eligible for 'skilled designations'.

### **Arbitrary designations of skill**

#### *a. Skill and education*

On the basis of the employer's designation of the worker's skill, women workers in the case study were almost evenly distributed in all three categories 33% unskilled, 32% semi-skilled and 27% in the skilled category, with 8% in highly skilled.<sup>20</sup> The employer's skill designation had no relationship to the educational background of the



workers. In the unskilled category 18 per cent of the women were doing their graduation simultaneously with working, 41% had passed 12th and 23 % has passed secondary school. Only two women in the unskilled category were just literate. The semi-skilled category had a similar distribution with a larger number who had passed secondary school. In the skilled category there are a larger number of women who have passed 12th as well as doing their graduate degree. The highly skilled category has a larger number who have finished 12th standard but no graduates. (Table: 6)

The mix of low as well as high educational qualifications in the unskilled and semi-skilled categories brings out sharply the lack of relationship between skill and educational background. Although the skilled category does contain women with higher educational qualifications, it also includes a significant number of women who have just passed secondary school.

Apart from formal educational qualification, some women workers had also done short diploma/certificate courses in tailoring, card punching, teaching, as well as informal courses. These women were also distributed over all the skill categories. (Table: 7& 8)

It appears then that in the electronics industry in Delhi there is not even recognition of formal educational qualifications. At the same time recruitment, particularly in large units are for women with a certain educational level. Five years ago it was enough for women to have passed secondary school but now the minimum requirement was 12<sup>th</sup> pass and above. However, these qualifications are not reflected in skill designations. It has been suggested that the requirement for some level of education is linked more with the needs of industrial discipline rather than to the technical requirements of the labour process.<sup>21</sup>

To a certain extent, caste and class did determine access to education. Women workers in the electronics industry in Delhi were predominantly Hindu and came from the upper castes of which 21 % were Brahmins. All the women who were graduates were from this section except for two from a scheduled tribe. The few women from

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<sup>20</sup> Worker's self definition of their skills and an assessment of skill based on; educational qualifications, years of service and the nature of work showed a different distribution of skill levels from the employer defined category.

<sup>21</sup> Breman mentions contradictory statements made by different employers, regarding the value of uneducated workers, even though in practice most of them hired workers with at least some years of schooling. "Even a few years of schooling will teach, in addition to elementary literacy, a feeling for order and regularity, acclimatization to a rhythm based on the division of the day, week, or month into permanent reiterative time periods. (Breman, 1996, pp.112)

scheduled castes had a lower level of education while Muslims and Christians had all passed secondary school. In an ironic way caste differentials in access to education were leveled out on the factory floor since the arbitrary designation of skill did not reflect these differences.

*b. Skill and length of service*

A number of managers mentioned that skill was related to length of service rather than educational background. In the case study however, there is no clear correlation between the number of years spent in the present job and skill designations. Workers in the unskilled category ranged from less than a year to 10-20 years of service in the same job, though a larger number (41%) had worked between 3-5 years. A similar distribution is found in the semi-skilled category, which included workers from less than a year up to 10-20 years of service. In the skilled category, 35% had worked less than a year while the rest had worked for more than three years. (Table: 9)

The data on the highly skilled category however is interesting since it highlights two elements of skill designations in the electronics industry - workers with long years of service and a new category of technically trained young women workers.

*Workers with long service records*

Two women who were considered highly skilled had worked from 20-40 years in the same company. For these women recognition of their skill capacities came after many years of work in the same company when they are in the late thirties or into middle age, with a very slow movement from unskilled to their present designation. For example, in Continental Device India Limited, a premier semi-conductor firm, women who were supervisors and designated as highly skilled had started work as helpers. After 23 years of service, they were promoted to their present status, a crucial additional factor being a pro-management, anti union attitude.

JD who is now a junior engineer and considered a highly skilled worker speaks of the difficulties of this process of skill recognition:

I started work in Ahuja Radios in 1968 as a wire girl, inserting components in PCB's. Slowly I became an all rounder doing assembly as well as export testing work. After 20 years, I asked for a change of designation. I went directly to the owner who agreed to send me for training as a junior engineer for 9 months. The company did sponsor my training but they made me sign a letter with conditions - I also had to agree to be transferred. After my training the trouble started - I was not given a confirmation letter even after six months. I was a good worker - they kept giving me three months extension for a long

time. Then finally I got the confirmation letter without any scale - I was also loosing out on bonus during this period - they kept cutting my wages saying that they would adjust later. Finally, I approached the union. (Interview J D, Nov 1994)

There is therefore a link between skill, job designation and length of service but this is not automatically given to women. Not only did women workers have to demand up-gradation and recognition of their skills but they also had to agree to conditions that affected their service record. In addition the change in designation did not also automatically result in an increase in salary - again this was an issue of struggle. In fact, JD's experience has been that demanding skill recognition led to her suspension for the last four years and an interminable and complicated court case.

This seemed to be a common experience as J K, a semi-skilled worker from Jupiter Radios reported:

All ladies are called floor assistants - o.k. so floor means floor but what does assistant to a floor mean?!- we are sent all over the place, which means we work on all floors. We should be called fitters or fitter's assistants since the work we do is T.V. Cabinet fitting. I learnt about scales and designations in the union so I raised this issue for the ladies. I told the GM (General manager) that workers spit on me because I don't have a scale. Then they started calling me Soldering girl - I had worked five years doing cabinet fitting, then two years soldering, now for the last four years am back at cabinet fitting. Even now I am only on the second scale as a semi-skilled worker and continue to be treated as a helper. (Interview J K, December 1994)

Since JK is also active in the union and militant she has been under constant surveillance and is currently suspended on charges of disobeying the foreman and refusing to work. Most women workers rarely raise the issue of skill and job designation since it implies loosing their jobs.

#### *New category of institutionally trained workers*

Other women in the highly skilled category had only worked between 1-3 years and one between 5-10 years. The determining factor in this case was not length of service but a technical degree. These young women belong to a new category of women workers in the electronic industry who had been hired in the late 1980's and early 1990's. They have done a 2-3 years course in Electrical Engineering at polytechnics, were designated as skilled or highly skilled, and were working as supervisors, and assistant engineers. They come from lower middle class to middle class backgrounds.

A number of large companies, particularly the multinationals, send these newly recruited workers for further training. For instance, Panasonic in its newly established unit in NOIDA sent a group of polytechnic trained boys and girls for a three-month

course at the Matsushita plant in Singapore. In addition, all the large electronic companies send women to government sponsored Electronic Research and Training Laboratory for further training. It is interesting however that though they are seen as skilled/highly skilled, designated as floor/line supervisors and the nature of work is mainly supervisory, at the same time they are often required to sit on the assembly line to fill in for absent workers.

In some companies, a dual process of upgrading workers and recruiting new institutionally trained workers is being initiated. For instance, in Continental Device, manufacturing semi-conductors, a regular training program was initiated after the company got the ISO 1000 certificate. Quality Control Circles were instituted and apart from training on-line, for two hours everyday line operators were trained off-line. The management stated that they preferred to train line workers to work on the new technology based production process since “they had a previous knowledge of the whole process”. Over time, the firm was planning to become totally computerized and convert line operators into keyboard punchers. At the same time new recruitment for the automated new lines of production was being made from diploma holders from Industrial Training Institutes with a minimum of secondary school education.<sup>22</sup>

A small survey of polytechnics in Delhi showed that a large number of women were enrolling for the course on electrical engineering and the institutes reported a 100% placement rate. Women with institutional training were aware that they were in demand in the electronics industry and were confident that they would get jobs easily in the new multinational companies. Women from this category who had just joined the newly setup Panasonic factory said they were just waiting to see how much increment the company would give after six months and if it was too low they would just quit.

There is a trend towards more institutional training in the electronics industry. The nature of jobs - i.e. the work women do is also becoming more flexible and increasingly workers are being hired as ‘general’ multipurpose workers in some of the large units of Type III and IV. However in other companies, although there is an increase in job rotation, this is not due to increased skill training but more a defensive management strategy to use available workers to the maximum. Small and tiny units do

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<sup>22</sup> The question that remains is whether this is work that is more skilled and is recognised and translated into higher remuneration. It has been argued that keyboard punchers in fact are less skilled than line operators and what new computerized technology demands are ‘computer illiterates’ rather than skilled workers.

have multi-skilled workers and due to competitive pressures, shift flexibly from one product to another, but this is not on the basis of new technology. A tiny unit for instance can be assembling televisions as well as producing paper napkins for a period, only to shift to making cellular phones after six months. The seasoned flexibility in this sector is a short-term strategy to maintain narrow profit margins.

In relation to skills, it is clear then that the only recognition of skill is a 'technical' degree. While this new category of women workers are being drawn into a labour process that requires institutional training and this is being recognised in skill categorization as well as job designation, for the bulk of women workers the long term trend is towards further downgrading as the Calcom worker's case discussed below illustrates.

#### *Downgrading skills and scales: the Calcom case*

The struggle of workers from Calcom Electronics is indicative and illustrative since skill designations are the basis on which different slabs of minimum wages are paid and is therefore an issue, which is an area of struggle and contestation. In fact, the main issue currently being fought out between unions and management in the electronic industry Delhi is the payment of statutory minimum wages.

Calcom Electronics produces tuners, picture colour tubes and televisions on subcontract for other companies. Phillips takes around 80 per cent of their output while other companies such as Videocon, Uptonica take the rest. The company has six units in Delhi and employs around 700 workers, with an annual turnover of between Rs. 100-125 crores. The plants are split primarily to benefit from the official concessions given to small-scale industries. In fact the two units in Okhla Calcom Electronics and Calcom Plastics Limited are run practically by the same management. In these two units about 200 workers are young, unmarried women while the rest are young men. Since April 1994 till today Calcom workers have been fighting a case against the management of Calcom Electronics and Calcom Plastics.

In April 1994, Calcom workers put forward a demand for implementation of minimum wages. Even as the union waited for a response, another issue emerged. In September, workers were surprised to find that when they were paid their salaries, *their designation had suddenly been changed from operators and fitters into 'workers', which changed their status from the category of skilled workers to unskilled workers.* Under the Minimum Wages Act, there are three categories of workers specified - skilled, semi-skilled and unskilled. According to the Minimum Wages Act, an operator

is a skilled worker, and taking into account, the increment passed by the Delhi Administration from 1st August 1994 (Rs. 38 for all categories) would be entitled to a minimum wage of Rs.1806. The Calcom management's strategy to redesignate workers resulted in operators being paid Rs.1342, which is the minimum wage calculated for an unskilled worker.

When they were recruited, workers had received appointment letters, which clearly stated that they had been selected to the post of Operator III in 1992. In February 1994 along with the notification of an increment in wages, the same workers were designated as Workers Grade III, Unskilled. Workers who were fitters were made into helpers and then fitters and operators were redesignated 'workers'. The management claimed that the earlier appointment letters were a 'clerical error' and that these workers are in fact unskilled.

There was no union in the factory. SY a 22 year old girl, operator, spoke to the manager and handed over a letter signed by all the workers demanding that this redesignation be reversed and the revised minimum wage be paid to the workers. When there was no response some of the workers approached a union, which subsequently filed a formal notice to the management demanding payment of minimum wages and return of jobs. So began a long saga as the struggle moved from the factory gate to the labour court to the Chief Minister and is continuing in the Delhi High Court.

As the case went to court, the management continued to belittle the work of these women stating that they are 'only 10th pass and were 'merely inserting pins into holes'. On the other hand, workers pointed out that they had worked for four years and many of them had diplomas and when they were appointed they were recognized as skilled operators. The management however even refused to accept the investigation report filed by the Labour Inspector who certified that indeed these women were operators and should be paid Rs. 1806 due to them as skilled workers. The struggle over skill definitions and wages is clearly linked to the fact that the Delhi Administration, unlike other places has been revising the minimum wages every six months. Given the high levels of unionization in Okhla, managers in electronics units have adopted the strategy of downgrading and changing designations from specific jobs to a general category as a way to avoid implementing the minimum wages order.

The issue of whether an operator is a skilled or unskilled worker is difficult to resolve since there are no clear guidelines on what defines skill. The specification in the Minimum Wages Act often lists the same designation under skilled as well as un

skilled. Courts and labour administrators too have no clarity on what constitutes a skilled worker and discussions are full of subjective assumptions and statements. A brief description of a meeting between Calcom women workers, Labour administrators and the Chief Minister of Delhi brings out the subjectivity of skill definitions.

During the hunger strike, Calcom workers met with the Chief Minister of Delhi and the Labour commissioners, and put forward their demand to be treated as skilled workers. Representatives from Calcom management were asked to respond and they said that all these workers were 'goondas' (criminal characters) and all of them were unskilled. "All they did was put wires into holes which can be done by anyone." When the women workers refused to accept the terms put forward by the Chief Minister and management, the Chief Minister lost his temper. He said that the issue of skilled/unskilled was all rubbish. He himself had a cook who had done a BA - should he then consider him a skilled worker and pay him Rs. 1800? He was extremely contemptuous of the girl's demands, and shouted saying that 'these days even engineers have to do sweepers work so what are you- young girls complaining about. (Extract, Field notes, February 1996)

The usual argument given to show that the work women do in electronics is unskilled or at most semi-skilled is that it 'can be done by anyone' i.e. requires very little training. Workers did state that the duration of training was short with 85% workers who learnt their jobs in less than 15 days, 6% 16 days to a month, 5% 1-3 months and one worker had done a course over 9 months to become a technician (for example J D). All training above three months was offered only in large units.

What is ignored, of course, is the hidden training women have received in the household, a training which employers take into account in recruitment but refuse to acknowledge. In addition, however many other aspects of training that these women have also acquired are ignored. Years of work experience in previous jobs in same or similar work, informal courses etc all build up skill capacities. If these 'qualifications' were taken into account the training that goes into the 'natural' skill of 'nimble fingers' would be acknowledged as much longer and the skill levels of these workers would be much higher than currently recognized. For instance, amongst unskilled workers a quarter of the women had worked in another job before joining the present company with some whom had worked in two or three jobs before the present one. While the semi-skilled workers were primarily new entrants in the labour force, half the workers in the skilled category also had worked in another job before the present one. In the highly skilled category, again two women had been employed elsewhere before this job. Amongst the workers who has held previous jobs in the last five years, more than half had worked in electronic factories, while the rest had worked in the plastics and export garments factories.

In addition, women workers had acquired informal qualifications in typing, tailoring, as beauticians and in data entry and teaching, some with certification. Interestingly, the largest number who has done some course was in the unskilled and skilled categories. A significant number had done typing courses - a course, which again enhanced skills in dexterity and speed of hands similar to sewing and needlework. These skills are transferable to assembly work, which is required in electronic factories. It is significant that employers in the SEEPZ implicitly acknowledge this aspect:

. the basic qualification for the job of assembly operator require that applicants be girls who have completed matriculation and have excellent skills in embroidery. In fact, girls are often asked to bring samples of their work for the screening. This may seem a strange requirement. For most outsiders it would be difficult to conceive of the relationship between embroidery and hi-tech electronic work. But for the employers the relationship is critically significant..... Girls whose embroidery work reflect a neat hand, an eye for detail, an ability to thread complex and intricate patterns are selected. The reason being that such work is proof of their ability to be neat, to work on detail, to understand and follow intricate patterns, and of the ability to concentrate and work long hours. Girls with these abilities are perceived to have already acquired the discipline of comprehending the sub parts of the larger whole and of integrating the segregated parts into one. Given basic schooling, employers find it easier to orient girls with these 'qualities' for electronic assembly work. (Thorat: 211: 1995)

Although these skills are acknowledged, they are not translated into recognition - most of the women workers in SEEPZ were designated as unskilled workers. (Sharma & Sengupta, 1984) Since these skills are the result of a socially invisible and privatized process of training within the household, they are seen as 'natural' and non- recognized.

The implications of designating women's work as unskilled and semi-skilled, along with a non-recognition of the training which prepares them for assembly line jobs has serious consequences. *Non recognition does not only imply an ideological downgrading of women's learned attributes but also affects wage levels. Skill designations are the basis for wage calculations and defining women workers as unskilled fixes them at the lowest level of the salary scale. Employers derive a double benefit - they hire women who have already been partially trained and at the same time by designating them as unskilled/semi-skilled, they can be paid lower wages.*

The arbitrariness of skill designations, the recognition/non-recognition of women's skills, the valuation of a 'technical' diploma over hidden training and informal courses, the shifting definitions used by management, labour courts and administrators court – all these point to the discursive and political construction of skill catego



ries, which are all constantly being contested and negotiated.<sup>23</sup> Rather than sidestepping the issue by only focussing on more training for women, strategies and policies for women's employment in this changing and flexible environment will have to cut through to the core of the issue of skill determination.

### **Alternative Skill Index**

An alternative assessment of skill which is based on an objective assessment of job content along with comparisons with jobs of comparable worth is necessary, but in addition it should also take into account informal courses which build up skill capacities, years of work experience as well as the 'invisible' household training. The International Labour Organization's action guide has even recommended that "The skills and proficiency women acquire informally through domestic, family and voluntary activities should be recognised and validated so that they can be transferable. Efforts should be made to *improve accreditation of skills* which women acquire at the enterprise level even if it is through informal on-the job training. (Lim, 1996, pp. 116) An alternative skill index would include the following:

Hidden household training + Education + informal courses + years of experience in same industry + years of experience in similar industry + years of experience in present job = skill designation

Given that employers implicitly do take these aspects into account, policies for women's employment have to make them explicit and move towards a re-assessment of the skills content of jobs women are doing. Job- evaluations, job classification reviews etc. would be practical measures to "give recognition to the full range of competency actually required to perform a job (both informally acquired skills and those gained through formal certification). (Lim, 1996, pp. 117). As Lim points out, the labour market demand for functionally flexible workers with skills that can be applied across industries could become a basis not only to increase women's wages, but would challenge gender segregation once their re-assessed skills are seen as applicable to other occupations as well. This would undermine a major component of the logic of accumulation in gendered labour regimes which is based on the exploitation of the hidden

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<sup>23</sup> Women and men workers are also implicated in this discursive construction as they too assert differences or similarities between men's work and women's work in different situations, foregrounding special qualities as strategies of job preservation as well as gender identity. (see A. Chhachhi & R. Pittin, 1996, A. Chhachhi, 1997)

advantages of female labour and the double standard applied to skill and job designations for women workers.

## **CONCLUSION**

### **Wire Girls to Operators to Electronic Engineers or just a cheap labour platform?**

The trends outlined above point to a paradoxical situation. The move towards flexibility in the electronics industry provides the possibility to challenge some of the entrenched discriminations against women workers in relation to definitions of skills and job designations, even as attempts are made to continue to deny workers the dignity and rights which are provided by law. While a new category of women workers with technical degrees and relatively high wages, coming from middle class families, may emerge, for the majority of women from working class households, the prospects of future employment are as casual workers, continued definition as unskilled, with no job security. Industrial restructuring is leading to new forms of differentiation amongst workers. Wire girls are now redundant, operators are being downgraded and very few women have access to the technical degrees, which give them skilled and well paid jobs.<sup>24</sup>

Future possibilities for women's employment in the electronics industry given the features of industrial restructuring and labour market flexibility sketched above depend crucially on international competition. There continues to be a controversy over the employment potential of the electronics industry. On one side there are arguments that as labour costs rises in South East Asia, India may emerge as the next assembly base for big Japanese consumer electronics companies. An assessment by Morgan Stanley, an American investment bank on wage differentials shows that the wage cost advantage of the NICS has been eroded for the past decade and India and China have the lowest labour costs today.

On the other hand it is stated that increasing automation has reduced the advantages India has as a low wage processor of electronics. As a World Bank commissioned study in 1993 states -"India's unskilled and semi-skilled labour, which is widely avail

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<sup>24</sup> The lack of clarity about future industrial trends and skill requirements is reflected in rehabilitation/retraining programmes for workers who have lost their jobs. A study of retrained workers found that the training courses were in many cases in the same skills and trades in industries, which had thrown out workers. There was only one person being trained for Computer data entry and 11 women were being trained for the age old gendered skills of tailoring, knitting and embroidery! (B. B. Patel, 1995, pg. 49) An overwhelming section of these trained workers were in casual jobs or self-employed.

able at a wage differential that is nearly as great as that for skilled manpower, is now relatively unimportant for the electronics industry because electronics process technology has become so capital intensive." (G.Gowen & D. Hefler, pg. 214, 1993) It is argued that the main reason for the entry of multinationals into India is not a search for cheap labour but access to a vast middle class market.

Whether India provides a cheap labour platform or just access to markets, the implications for women workers are serious. The process of industrial restructuring in the electronics industry in this transitional period is leading to the social exclusion of men and women workers. This ranges from exclusion from protection by labour laws, payment of minimum wages as well as a total exclusion from employment. At the same time there is hope, as unionisation still continues to spread in the industry, often initiated by young women workers. There is a new consciousness as the women who produce the televisions also consume the images produced by television. In their own words 'they kept quiet for a few years but then like *jwalamukhis* (volcanoes) they exploded into industrial action.' These women are militant, innovative and open to new ideas. Strategic and policy interventions by unions, women's organisations as well as policy makers which move beyond traditionally defined demands and recommendations would find a response from this new workforce and could limit to a certain extent, the overall trend in the industry towards social exclusion.

## TABLES

**Table: 1** MINIMUM WAGES IN DELHI ELECTRONICS

Minimum Wages: Rates as on 1.8.94		Minimum Wages: Rates as on 1.8.95	
Category	No. of women	Category	No. of women
Below minimum wage Upto Rs.1419	56 42%	Below minimum wage Upto Rs. 1544	76 57%
Unskilled minimum wage Rs. 1420 – 1585	20 15%	Unskilled minimum wage Rs. 1545 – 1710	12 9%
Semi-skilled minimum wage Rs.1586 –1843	14 11%	Semi-skilled minimum wage Rs. 1711 – 1968	20 15%
Skilled minimum wage Rs. 1844 – 2000	18 14%	Skilled minimum wage Rs. 1969 – 2500.	4 3%
Above minimum wage Above Rs. 2001	24 18%	Above minimum wage Above Rs. 2501	20 15%
Total	132 100.0	Total	132 100.0

**Table: 2** Age and Marital Status: Currently employed workers

Age category	Unmarried	Married	Divorced	Widowed	Total
Fairly young 15-20	100.0				16 12.1
Young 21-30	58.0	36.0	6.0		100 75.8
Prime 31-40		57.1	14.3	28.6	14 10.6
Middle age 41-50		100.0			2 1.5
Total	74 56.1	46 34.8	8 6.1	4 3.0	132 100.0

**Table: 3** Working Hours and hours household labour

Factory working hours	n.r.	5 hours	3-5 hrs	0-3 hrs	No household work	Total
8-8.5 hrs	1.6		30.6	59.7	8.1	124. 93.9
4-7 hrs		100.0				2. 1.5
N.r.		33.3		33.3	33.3	6. 4.5
Total	1 1.5	4 3.0	38 28.8	76 57.6	12 9.1	132 100.0

**Table: 4** Marital Status and Overtime

Marital status	No over-time	No fixed hours	Upto 1 hr	1-2hrs	2-3hrs	N.R.	Total
Unmarried	45.9	29.7	2.7	13.5	5.4	2.7	74 56.1
Married	47.8	21.7		8.7	13.0	8.7	46 34.8
Divorced		25.0	25.0	50.0			8 6.1
Widowed	50.0				50.0		4 3.0
Total	58 43.9	34 25.8	4 3.0	18 13.6	12 9.1	6 4.5	132 100

N.R.: no response

**Table: 5** Currently employed Women Workers Designation & Wages

Occupation	Minimum wage	Maximum wage	Average wage	Percentage of currently employed women workers
Operators/Wire Girls	1050	1950	1500	41%
Helpers	900	2609	1754.50	18%
Assistant Technician	1950	2250	2100	3%
Technician	2550	2700	2625	6%
Quality Control	1200	2230	1715	5%
Junior/Associate Engineer	1919	4000	2959.50	6%
Line Supervisor	1400	4500	2950	6%
No designation	350	1950	1150	15%
Total				132 100.0

**Table: 6** Employer defined Skill and Education

skill category	Literate	SSC fail	SSC pass	12 <sup>th</sup> pass	Graduate	Total
Unskilled	4.5	13.6	22.7	40.9	18.1	44 33.3
Semi-skilled	9.5	14.3	47.6	23.8	4.8	42 31.8
Skilled		5.9	27.7	50.0	11.1	36 27.2
Highly skilled			20.0	80.0		10 7.6
Total	6 4.5	16 12.1	42 31.8	54 40.9	14 10.6	132 100

SSC: secondary school

**Table: 7** Employer defined Skill and Informal Courses

skill category	Beautician	Typing	Tailoring	None	Total
Unskilled	4.5	31.8	9.0	54.5	44 33.3
Semi-skilled		4.8		95.2	42 31.8
Skilled		29.4		72.2	36 27.2
Highly skilled				100	10 7.6
Total	2 1.5	26 19.7	4 3.0	100 75.8	132 100.0

**Table: 8** Employer defined Skill and Diploma

Skill category	Tailoring	Data entry	Teaching	None	Total
Unskilled		5.9		94.1	44 33.3
Semi-skilled	4.8			95.2	42 31.8
Skilled		16.6		83.3	36 25.8
Highly skilled		40.0	20.0	40.0	10 7.6
Total	2 1.5	12 9.1	2 1.5	116 87.9	132 100

**Table: 9** Employer defined Skill and Length of Service

skill category	0-1 yr	1-3 yrs	3-5 yrs	5-10 yrs	10-20 yrs	20-40 yrs	Total
Unskilled	9.09	27.2	40.9	9.09	13.6		44 33.3
Semi-skilled	19.0	28.6	23.8	19.0	9.5		42 31.8
Skilled	33.3			38.8	27.7		36 25.8
Highly skilled		40.0		20.0		40.0	10 7.6
Total	24 18.2	28 21.2	28 21.2	28 21.2	20 15.2	4 3.0	132 100

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